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Professor of Architecture, Cornell University

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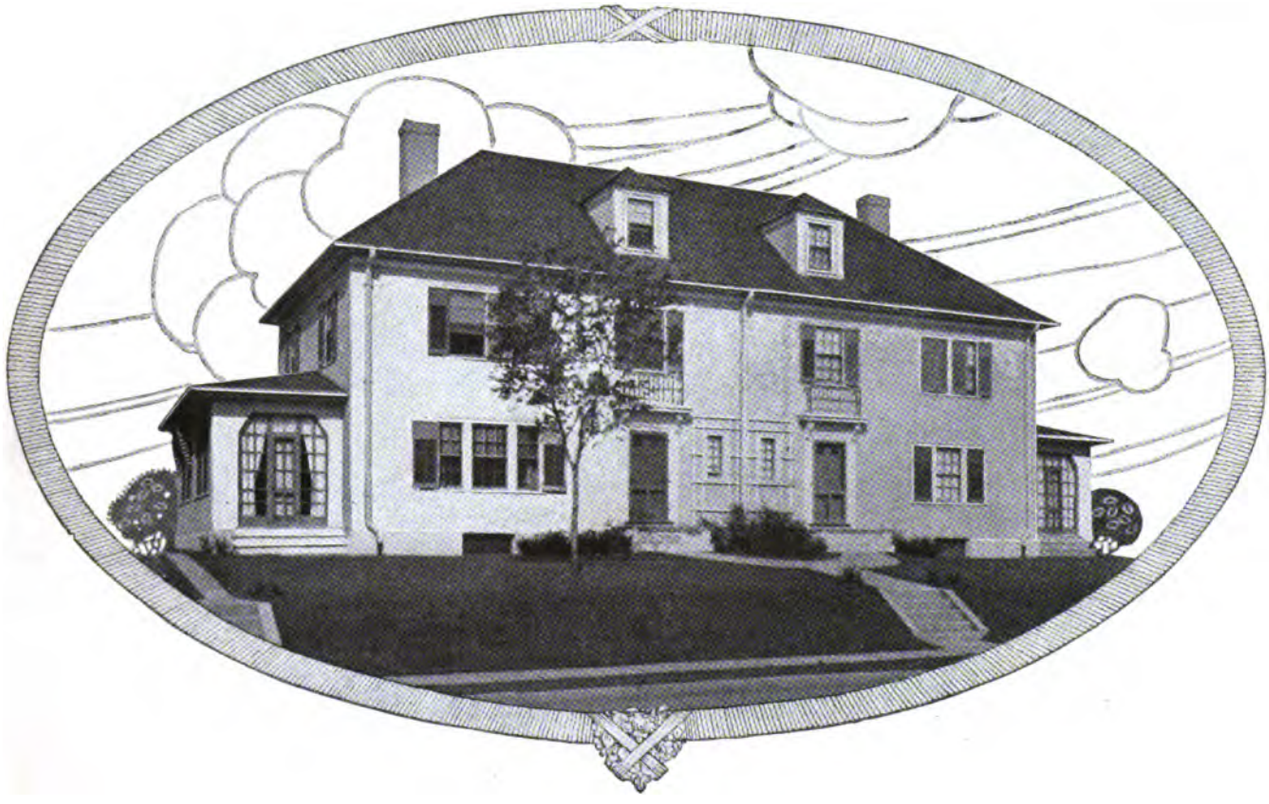
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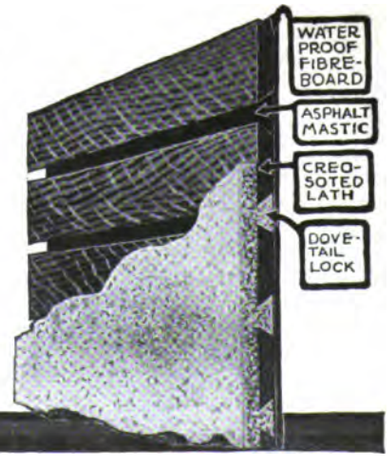
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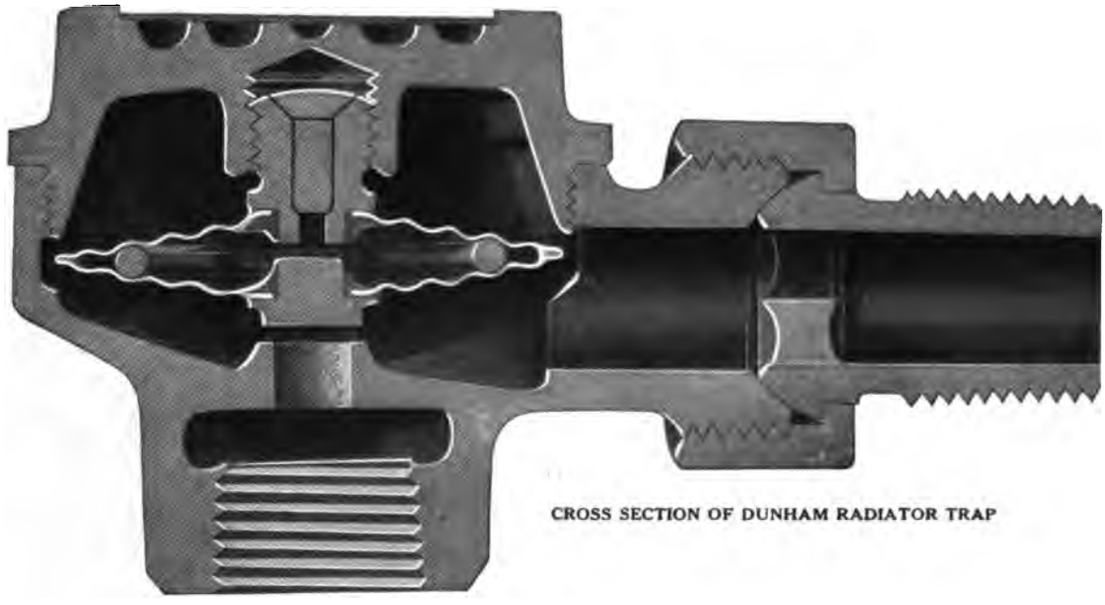


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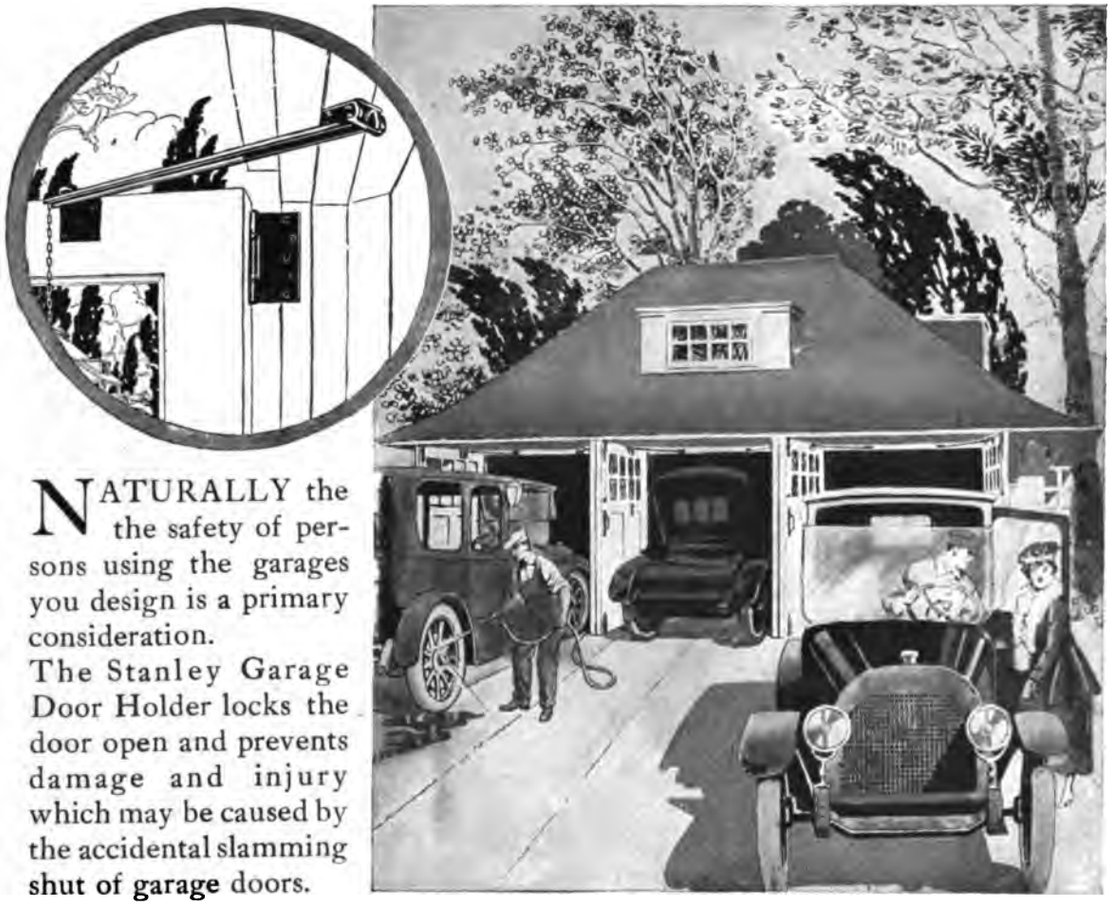
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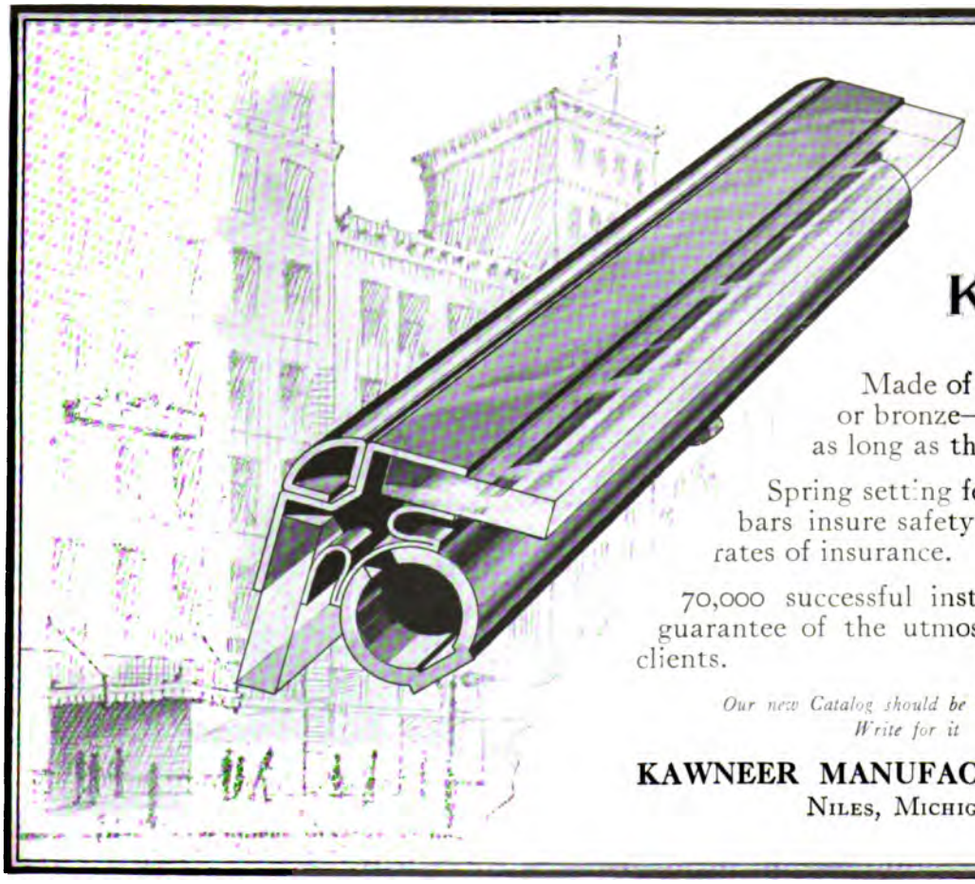
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VOL. VIII, No. 1 January, 1919

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MUCH has been written and said with regard to the need of co-operation between the engineer and architect in great engineering works. The strongest argument for the development of this field for the architect's usefulness is found in the success,—in ways both practical and artistic—of structures designed with this sort of co-operation. The Alexander III bridge at Paris, the Dusseldorf bridge across the Rhine, the New York Connecting Railways bridge over the East River, the Elevated Railways structures in Paris, certain of the new elevated stations in the suburbs of New York, and other structures, such as our newest railway terminals and our great skyscraping buildings, show the possibilities for the promotion of fine art in many forms of construction where the architect is made a co-partner in the working out of the plans. In this number we have the first of a number of articles to be contributed by Mr. C. Howard Walker who speaks with authority on this aspect of the architect's opportunities.

Continuing the general line of discussion which we developed in our December issue, we present in this number a very charming and carefully studied scheme for a studio and garden by Messrs. Delano & Aldrich. Set in an almost ideal location and with a building designed with this firm's usual restraint, it yet has, as a whole, a playfulness and interest that makes it one of the outstanding examples of architecture in this field.

In the house of George S. Brewster, Esq., at Brookville, L. I., by Messrs. Trowbridge & Livingston, we have an interesting illustration of the reliance which the American architect places on the work of Colonial days, yet, in this case, with a certain elaboration that is more consistent with the more varied and intensive life of our day. The farm buildings on the estate by Mr. Alfred Hopkins, carry out the general feeling of the main house and are an interesting illustration of the work of one who has specialized in this field of design.

The town house for William Sloane, Esq., on Park Avenue, New York, also by Messrs. Delano & Aldrich, is indicative of the work of this firm in general, and suggests in particular the atmosphere of old New York. The interiors are adapted from old and well-known architectural masterpieces of England and the Colonies and are developed with a certain individual charm that is peculiar to this house.

Mr. Phillips' valuable and instructive series of articles are continued in this number with special reference to vaulted ceilings of the Renaissance.

The articles on housing, upon which the Review has placed special emphasis since the subject attained a national interest, are continued with two war housing schemes: one for the Ordnance Department and the other for the United States Housing Corporation, the two being widely separated geographically, and designed accordingly, the contrast between the two affording an interesting illustration of the effect of local and special factors on design, plan, and type of accommodations.

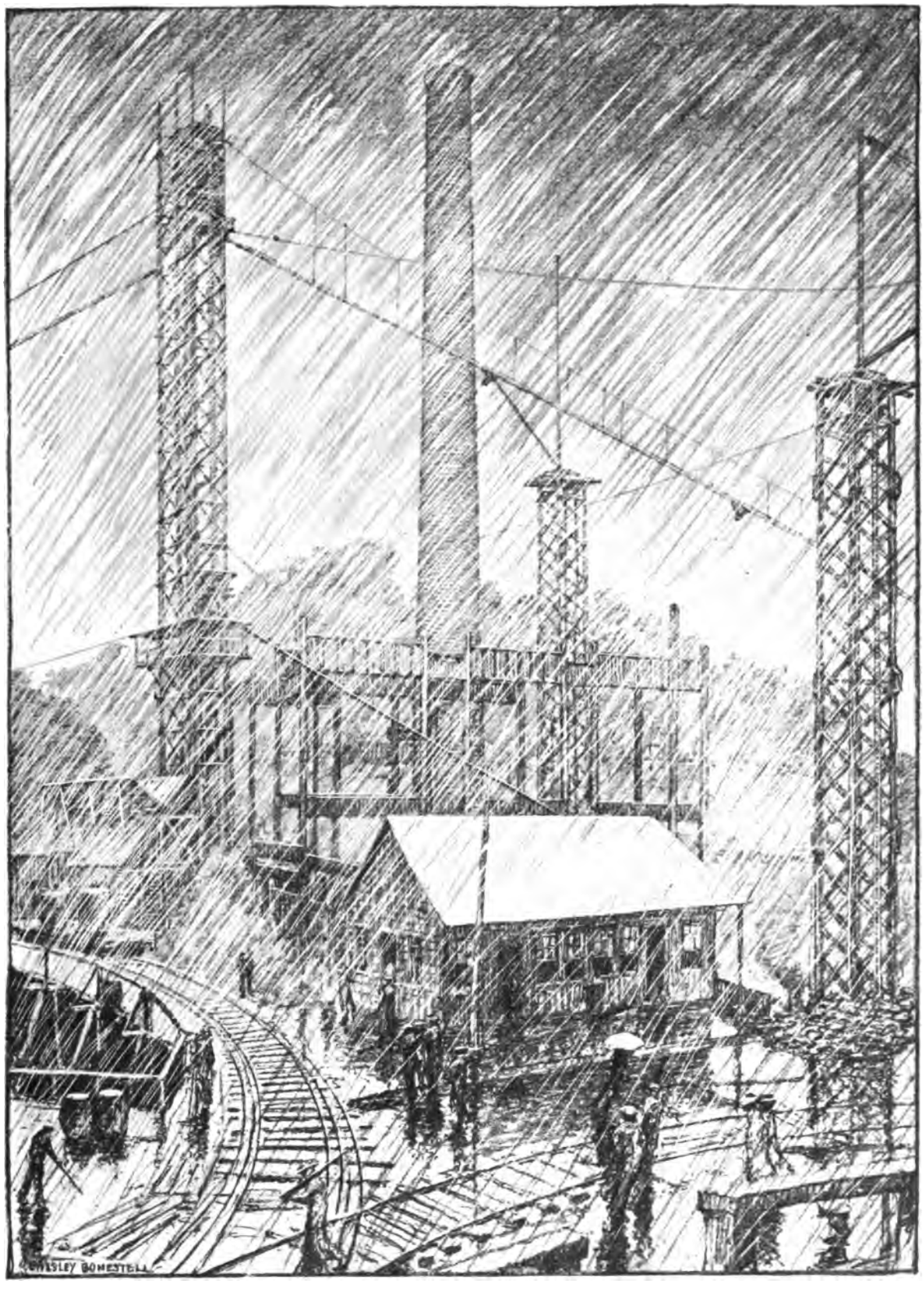
In the February issue we will publish a valuable survey of the work that has been done in the Philippine Islands under the direction of the United States Government in the provision of adequate and appropriate buildings for the housing of federal and municipal departments. This article has been prepared by Mr. Ralph Harrington Doane, acting consulting architect for the Federal Government, who illustrates his discussions with many fine and striking photographs illustrating completed and proposed work.

A SPECIAL ISSUE ON HOTELS

THE March issue of the Architectural Review will be a SPECIAL HOTEL NUMBER *given to the presentation of the world's newest and largest hotels,* THE HOTEL PENNSYLVANIA *and* THE HOTEL COMMODORE, *both in New York. These two developments are, perhaps, the outstanding architectural and building achievements of the past year. They are of unusual interest to the architect and to many others, not only because of their vast size and great cost, but because they are the work of two of the leading architectural firms in the country,—the* HOTEL PENNSYLVANIA *by McKim, Mead & White,—the* HOTEL COMMODORE *by Warren & Wetmore.*

The Architectural Review is fortunate in being able to give to its readers in this SPECIAL NUMBER, *complete floor plans of the hotels, selections of valuable working and detail drawings from the architects' offices, and a large number of plate reproductions from photographs of the exterior and interior of the buildings. A complete textual description of each will be a feature of the number, in the preparation of which we have had the co-operation of the architects themselves.*

The MARCH *number will be one which no architect can afford to be without, and we are glad to announce to our subscribers this service, which we are sure they will appreciate.*



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LITHOGRAPH BY CHESLEY BONESTELL

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The
ARCHITECTURAL REVIEW
Volume VIII | Old Series Vol. XXV | JANUARY 1919 | Number 1

THE SUPPLEMENT TO UTILITY

By C. HOWARD WALKER

THE profession of Civil Engineering has loomed large in the work of the last two years and has been required in all branches of the service. It is right and natural that this should have occurred, as the work itself was pre-eminently that which could be handled ably by the large number of members of the profession—especially as the profession is one of an exact science, thoroughly formulated in its processes of action. It is one in which definite facts have been determined, results correlated and methods established. Its study is intensive, its conclusions in most cases irrefutable—and its character specific.

Under such conditions, it has distinct self-imposed limitations and there was no necessity in the work upon which its members were employed for the limitations to be exceeded.

Its principal activities are devoted to accurately defining areas and contours, and safely spanning voids, supporting weights, and controlling the action of water and air. These are necessary utilitarian demands which can in no case be ignored—and admit of little if any speculative treatment. Therein lies the value of the profession, a value which is so universally acknowledged that its limitations are overlooked. For in all distinguished utilitarian accomplishments of mankind, whether they are of sound or of sense, whether of language or of statement of fact, there is a supplement that transcends utility itself. It has been termed Art, and it is not an exact science. In general terms, it can be assumed to be the performance done as well as it possibly can be done. Immediately a standard for this ultimate result is requisite, and that standard cannot ignore the qualities which supplement utility. This fact is recognized by cultivated man in whatever he expresses himself, and is apparently existent in uncivilized man. It has been left to the American engineer to neglect too often this recognition—and to erect structures which answer utilitarian purpose with no attempt to transcend it—and by so doing relegate their work to a position of tolerated unfortunate necessity.

This is a land of rapid expansion, forcing speed of action, and time is begrudged which is unessential to the pressing need. Therefore any improvement must be one of intention before it becomes one of achievement and it is to a general design rather than to the specific instance that this appeal is made. It requires no argument to support the contention that much of the exposed work of civil engineering in this country is not an embellishment and it is only too apparent that there has been little desire that it should be an embellishment, and it seems possible and probable that the ignorance of the means by which it could be improved is not considered in any way derogatory to the profession by many of its members. If this is the case a serious mistake occurs, which is not made by French and Italian engineers. There is every prospect of extensive work in the next few decades, and this work should be of the best character. There is another profession to which this Journal is devoted, that of Architecture. It is classed as one of the Fine Arts, with Sculpture and Painting, and incorporates them in its expression. It is not an exact science, and therein lies its weakness and its strength, but it is as necessarily affiliated with a number of exact sciences as it is with all the arts. The architect, as his name implies, is the chief builder, but that does not imply that he is only a constructor. His knowledge must be broad, but need not be minutely specific, and above all things he must be an artist, for he can obtain the service of the exact sciences at will. As the appreciation of his ability as an artist is coincident with the visual impression made upon a public with which he is in sympathy, it is obvious that unless he is so great

a master that his work is incontestible, the average of his work will be but little beyond the taste of his patrons, and that taste has many varieties. But it is also obvious that his value is acknowledged by the public while it is conspicuously ignored by the engineers. Such a condition is a misfortune. It is futile to attempt to place the cause of this lack of collaboration between the two professions, a lack which does not exist excepting among English speaking peoples, and which can be primarily due to a sort of inertia more than to any other cause. There is a brilliant example of the success of collaboration between engineers and architects in the Nicholas Bridge across the Seine at Paris, and even the viaducts of the Paris elevated road have received care in design.

It is not unusual for engineering problems in this country to be worked out, foundations and fundamental structure determined, and then an architect called in to make a silk purse of this inco-ordinated fabric. It is not at this point that the abilities of the architect can be of any real service. His utmost endeavor can only add ornament which is extraneous. The value of the architect is superlative in the initial proportion of the masses, the relative scale of structural parts, the light and shade of major details, the tone and color of the whole. Too often, perhaps influenced by the hypnotic fascination of Mr. Ruskin's apotheoses of detail, the architect is assumed to be an ornamentalist, a purveyor of rosettes and finals and decorated mouldings, which things can frequently be well omitted. No poorly proportioned structure can be saved by detail. No well proportioned structure can be spoiled by detail, though it may be outraged by it. Engineering structures are conspicuous at a distance, therefore they need study for their effect from a distance. But enough of criticism. The fact is manifest. On the one hand is a profession which is an exact, specific and limited science, dealing largely in these days with steel, iron and concrete; an absolutely necessary and trustworthy profession, essential in all large building operations, and which is devoting itself to this specific work and to nothing else. On the other hand is a profession which is dealing with all sorts of projects, using every variety of material and conversant with many methods of expression, and which devotes itself to the visual evidence of that use; which transcends utility though dependent upon it for its purpose and for its incentive and for its body, while it gives it a visible expression and attempts to give it a soul—a profession which is not an exact science but is dependent upon exact sciences to assist it, welcomes them, uses them, and appreciates them, but asks collaboration with them and not coercion from them, because it has an element in it with which they do not pretend to deal. Can any two professions be more closely affiliated than those of architecture and of sculpture, of architecture and of painting, of architecture and the industrial arts, and of architecture and engineering? All of these, excepting engineering, naturally, without question, and cordially collaborate with architecture. Engineering frequently does not, but prefers to do its work alone, satisfied it needs no assistance.

Until very recently, steel and iron structures have had an unclothed skeleton appearance which has been scarcely decent, somewhat as if the intimate secrets of elemental evolution were thrust upon the sight, unshrouded excepting by a coat of paint, and with an ungracious disregard for all



Spires of the Cathedral at Rouen

lines excepting those determining the shortest distance between two points, which is at the least brusque. As any structure of this kind takes the form of grillage, experiments have been made to treat such structures as decorated grills. Brobdignagian grills, monstrous in scale. Such attempts indicated a desire to please, but even these are absent in most American work.

The central spire to the Cathedral at Rouen, of which the sole superiority is in its greater height than the adjacent noble stone spires and the Eiffel tower, which rears its head as a tour de force and has fortunately found its purpose as a wireless station, are examples of the intrinsic beauties of undisguised steel. But now it is acknowledged that expansion and contraction of metal under changes of heat and cold and oxydization of metal when exposed, must be neutralized by a non-conducting covering, or the structure will deteriorate with progressive rapidity (incidentally this fact was realized by the Romans); and concrete has provided the skeleton of steel with a body.



Vista Down Ludgate Hill in London

At once the structures have again become in scale with their surroundings, and the chatter of chords and struts, of girders and braces, is harmonized into one simple organism of undisturbed surfaces. But the fashioning of the covering now deserves attention, which the architect is best qualified to give. It matters little how he may be considered provided the result of his skill improves the appearance of the structure. Call him, if it pleases, the tailor who provides an excellent suit of clothes. At present much of the clothing of engineering structures is either conspicuous by its absence, or of the class known as "hand me downs." The result is unworthy of the expenditure of money by corporations or by municipalities. The beauty of a city, a town or of a landscape is a valuable asset. The lack of it is an offense even to an uncultivated taste. The individuals composing the public constantly attempt to improve the appearance of their personal environment, but those serving the mass of the public give transportation and security and frequently stop at that point.

Security is engineering's trump card—but it does not ensure all the tricks. There is a vista down Ludgate Hill in London, at the end of which rises the dome of St. Paul's, a dome which structurally leaves something to be desired, but which is the crowning glory of the city. It is seen at its best at the end of this vista and directly across below it is the broad, horizontal swath of the railway viaduct, naked and unadorned. Perhaps there is no more conspicuous example of utilitarian bravura, in the presence of one of the monuments of the world. An apotheosis of the virility of labor has appeared in illustrations of shipyards and of huge industrial plants, softened by wreathes of steam, tempered by the artist's lost line. The selection of moment, of atmospheric effect, of the mystery of the indistinct is one of the prerogatives of the artist, and the accumulated evidence of energy stimulates an admiration for its expression, but there is no inherent beauty in uncamouflaged train sheds. Much of the environment of industries is more impressive at night than by day, which indicates that utilitarian expression needs the supplement of design to be attractive by light of day. This design is obtained by careful selection of the point of view, but is accomplished by the architect by the initial establishment of design. Compare the concourse of the North and South Station in Boston with that of the Pennsylvania Station in New York.

STUDIO AND GARDEN FOR MRS. HARRY PAYNE WHITNEY, WHEATLEY HILLS, L. I.

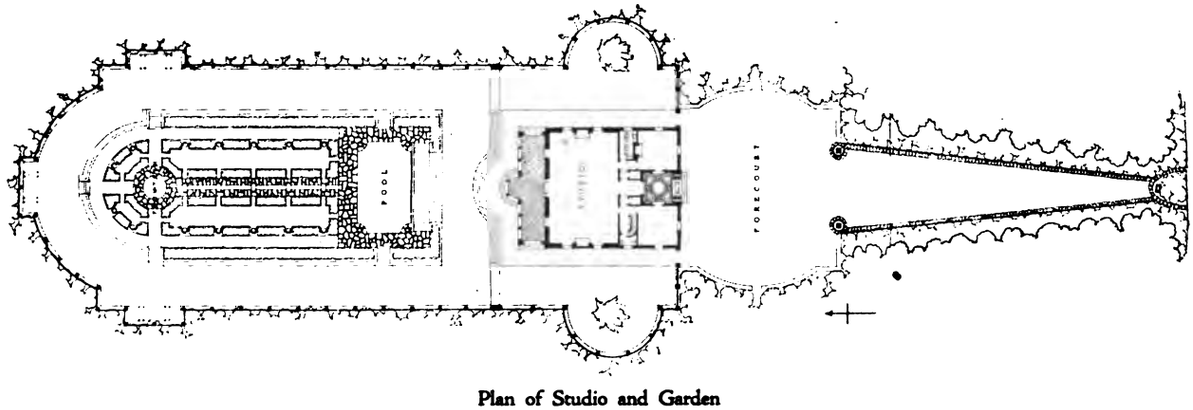
DELANO & ALDRICH, ARCHITECTS

MRS. WHITNEY'S studio could hardly fail to be an inspiration to anyone interested in any phase of art. In its setting of woodland, lawns and naturalistic plantations of shrubs, vines and flowers, it contrasts quite strikingly with the style and environment of her studio in the heart of the life of the metropolis. The garden which is pictured from various angles with accompanying illustrations would seem to provide an almost irresistible temptation to play rather than to work. The planting has been so cleverly placed in a scheme that has elements quite formal in plan that it does not appear as though conventional elements of landscape design were influential in devising the layout. Most of the views that one gets of the flower beds show but few symmetrical or regular lines and to this apparent geometric confusion is added a riot of color, the whole framed by a picturesque stockade of split saplings covered with vines which creates the desired sense of enclosure while still keeping in the spirit of the adjoining wood.



Corner of Studio at Gate

There is a rectangular pool at the foot of the steps in the garden front of the studio. The sense of coolness added to the reflections of buildings and greenery which are cast from it, lend that charm which is an inseparable attribute of almost every garden. The water note is repeated in the small circular pool at or near the end of the walk toward the pergola, against the dark shadows of which can be seen a silver jet, splashing in the sunshine. The two pools are connected by a tiny canal or lagoon which runs in between the grass-grown stones which form a path along its brink. The rather small and very



Plan of Studio and Garden

informal pergola at the far end of the garden would seem a cool and inviting place for afternoon tea, and is just the right distance from the studio to make it convenient of access and not removed from direct communication with the labors that are done there. Stretches of evenly cut lawn show here and there between the flower beds. Possibly the most outstanding feature of the problem which the architect has solved is the quick transition from the formality of the studio to the complete simplicity and restfulness of the garden.

The studio itself is adapted from the Italian Renaissance and is finely detailed and beautifully set in an almost ideal location. It is simple enough to inspire a feeling of intimacy and yet dignified and restrained so that it is unmistakably a place that was designed as a real inspiration for real work.

The interiors of the studio building are of especial interest. The wall decorations, in particular, have been given more than ordinary study in a building of this type. Mr. Robert W. Chanler has executed some wall portraits, including one of Mrs. Whitney and others of her friends that have a decorative as well as personal interest. *R. W.*



Detail of Garden Enclosure and Pool



The Garden

THE RESIDENCE OF GEORGE S. BREWSTER, ESQ., BROOKVILLE, L. I.

TROWBRIDGE & LIVINGSTON, ARCHITECTS

THE property at Brookville, L. I., on which Mr. Brewster's house is located was quite an isolated tract—wild in character and heavily timbered, at the time building was started. The site selected for the house was elevated above much of the surrounding wooded areas and at a distance of a quarter-mile or more from the main road. The first step, therefore, in development was the opening up of the area about the selected building site by the cutting of timber, not only to provide an open space for lawns and gardens in the immediate vicinity but to create vistas through the enclosing woods across the hills and dales that lie beyond. The general scheme of landscaping devised by Mr. James L. Greenleaf, landscape architect, co-operating with the architects, Messrs. Trowbridge & Livingston, is shown on the accompanying plan. The important and striking feature of this work is the scheme of *allées* cut through the timberland, which in a general way suggest the *allées* at Versailles, though of course lacking the statuary, balustrades and other architectural adjuncts in the composition at Versailles. From the terrace on the south front of the house vistas are thus opened through three such *allées* through the timber, one toward the west, another toward the southwest called the Greenway, and a third to the south. Between these, secondary vistas have been cut for short distances, terminated by little *bosquets*. The main rooms of the house, living and dining rooms and library, all face to the southwest, and take in the vistas described.

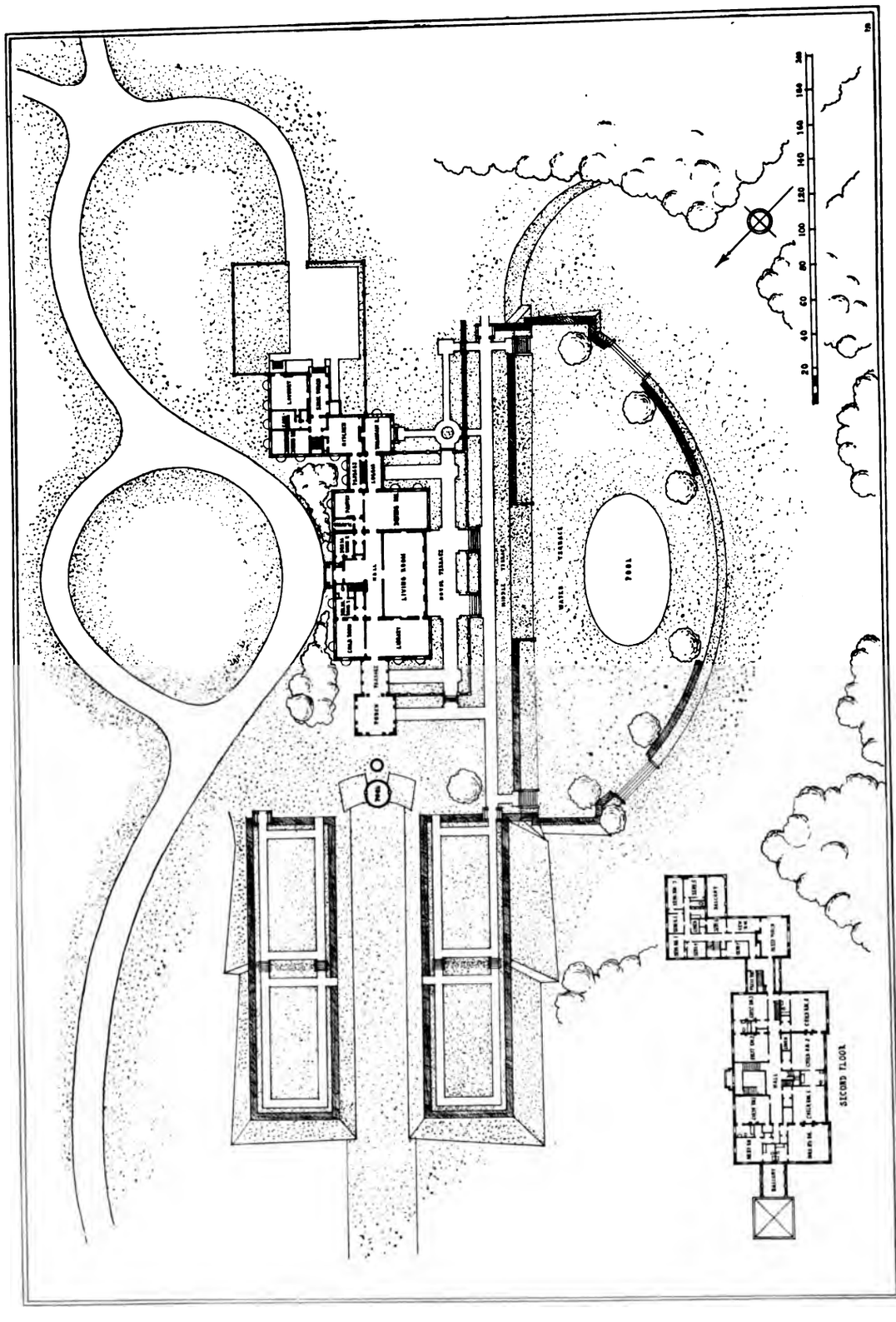


Detail of Doorway

Toward the westerly side of the house, a formal garden has been developed—connecting with the terrace running about two sides of the building. This garden lies on the axis of the pavilion and loggia, forming the westerly end of the house—so that a continuous vista is had of the garden—through breakfast room, dining room, main hall, library, loggia and parlor out into this charmingly formal retreat. At the head of the garden is an antique fountain and a series of terraces designed in the shape of an amphitheatre. Facing the south front of the house and immediately below the first of the terraces constructed on this side, is a large pool, so placed the effective reflections of the house are obtained from various points of view.

The style of the house, exterior and interior, follows Colonial motifs consistently. The high hipped roof reminds one of Westover, and is the dominant feature of the landscape seen over the tops of trees from the main road. The walls are of brick and limestone, the brick laid in Flemish bond. The end pavilion at the head of the formal garden has a very charming Palladian motif on three sides which is hidden in the photographs by the awnings. The pavilion and loggia are enclosed in glass during the winter season but opened on all sides during the warm weather. The detail of the entrance carries with it the true Colonial feeling, though somewhat more elaborate and treated a little more freely than in the Virginia mansion which the house as a whole suggests. The entrance motif was inspired by, in fact, adapted from, that in Independence Hall, Philadelphia. The entire building is of fireproof material, with terra-cotta floors and partitions.

The farm buildings, illustrated in Plate X, were designed by Alfred Hopkins, architect, and are a great addition to the estate. *R. W.*



PLAN OF THE HOUSE AND PROPERTY IMMEDIATELY ADJACENT
HOUSE OF GEORGE S. BREWSTER, ESQ., BROOKVILLE, L. I.
TROWBRIDGE & LIVINGSTON, ARCHITECTS
JAMES L. GREENLEAF, LANDSCAPE ARCHITECT

RESIDENCE FOR WILLIAM SLOANE, ESQ., NEW YORK CITY

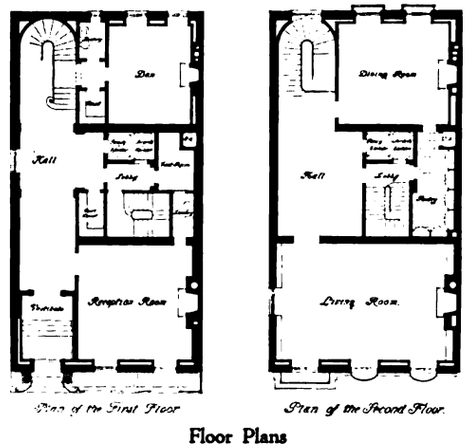
DELANO & ALDRICH, ARCHITECTS

IN an extremely simple and chaste style of architecture, indicative of the firm of architects who designed it, the residence for William Sloane, Esq., on Park Avenue, New York, conveys a suggestion of old New York — the New York of Washington Square. The building is one of three on the block where it stands, the whole group having more or less the same feeling in design, a factor of some importance in an appreciation of the building as it stands. The structure, of fireproof materials throughout, is of brick, laid in English bond, with marble trimmings on the first floor. All exposed walls are treated exactly as the front, giving a finished appearance on all sides, in contrast with city work generally, where facing material is carried back only a few feet on side walls.



Detail of Entrance

From the entrance floor, with its reception room, den, coat room and the like, the main staircase leads up to the living room and dining room on the second floor, with pantry between. The main staircase, in this instance, carries no farther than this, that is to say, from the entrance floor to the main floor, a feature quite unusual in this type of building. Most of the access up and down is by means of elevators, of which there are two, located in the center of the house, one for the owner and a second for service. This limitation of space for communication increases the area available for living purposes. The laundry, instead of being in the basement, as is usually the case, where work would probably be done by artificial light, is located at the top of the house with the servants' quarters, and where there is an abundance of light and air. By increasing the area of service space below, this arrangement provides for a very fine and roomy kitchen at the back of the house, entirely above the ground level, as the yard is low.



Plan of the First Floor. Plan of the Second Floor.

Floor Plans

The interiors are the work of W. & J. Sloane, of New York. The mantel in the living room is taken from the drawing room in Belton House, Grantham, England, one of Lord Brownlow's noble and beautiful mansions, by Sir Christopher Wrenn, and the general treatment of the room is suggestive of the same source. The elaboration typical of that period, however, has not been followed, yet the room, which is panelled in pine, is a dignified and successful production, quite suggestive of the period from which it is drawn. The dining room is practically a reproduction of the dining room in Graeme Park, Horsham, Penn., built for Sir William Keith in 1722. The wall paintings are Eighteenth Century Dutch art works. The reception room, carried out in grays and white, is inspired by the Adam period. *R. W.*



DETAIL OF ENTRANCE

STUDIO OF MRS. HARRY PAYNE WHITNEY. WHEATLEY HILLS, L. I.

DELANO & ALDRICH, ARCHITECTS



GENERAL VIEW, ENTRANCE FRONT

STUDIO FOR MRS. HARRY PAYNE WHITNEY, WHEATLEY HILLS, L. I.

DELANO & ALDRICH, ARCHITECTS



VIEW FROM ENTRANCE

STUDIO FOR MRS. HARRY PAYNE WHITNEY, WHEATLEY HILLS, L. I.

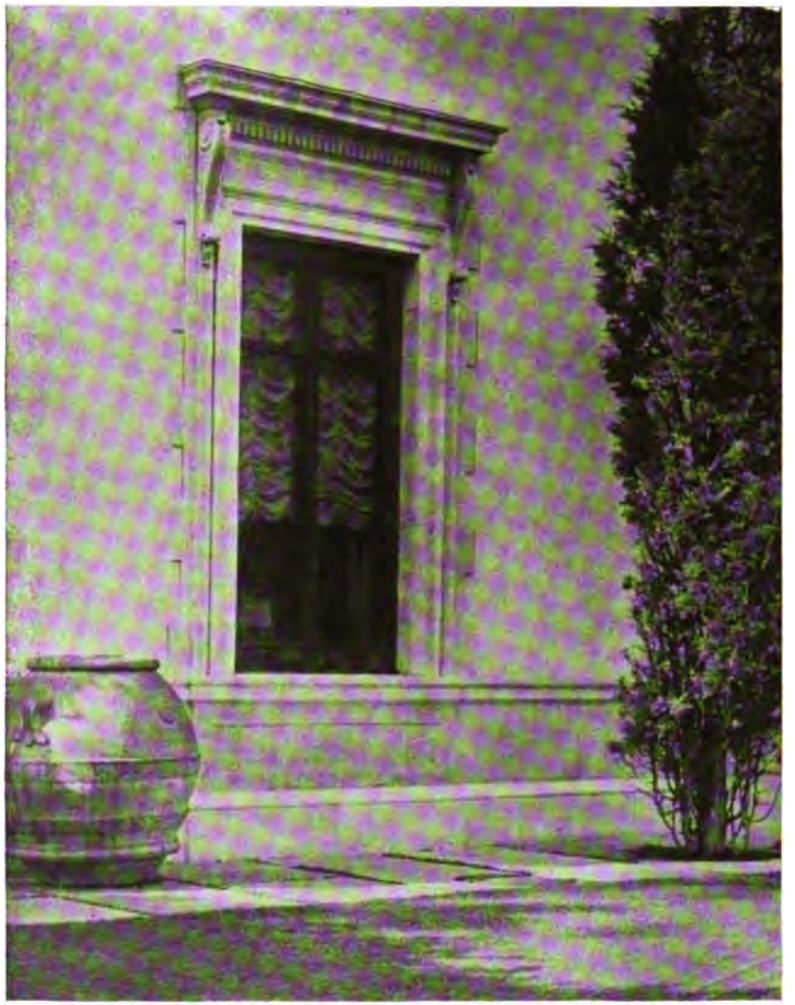
DELANO & ALDRICH, ARCHITECTS



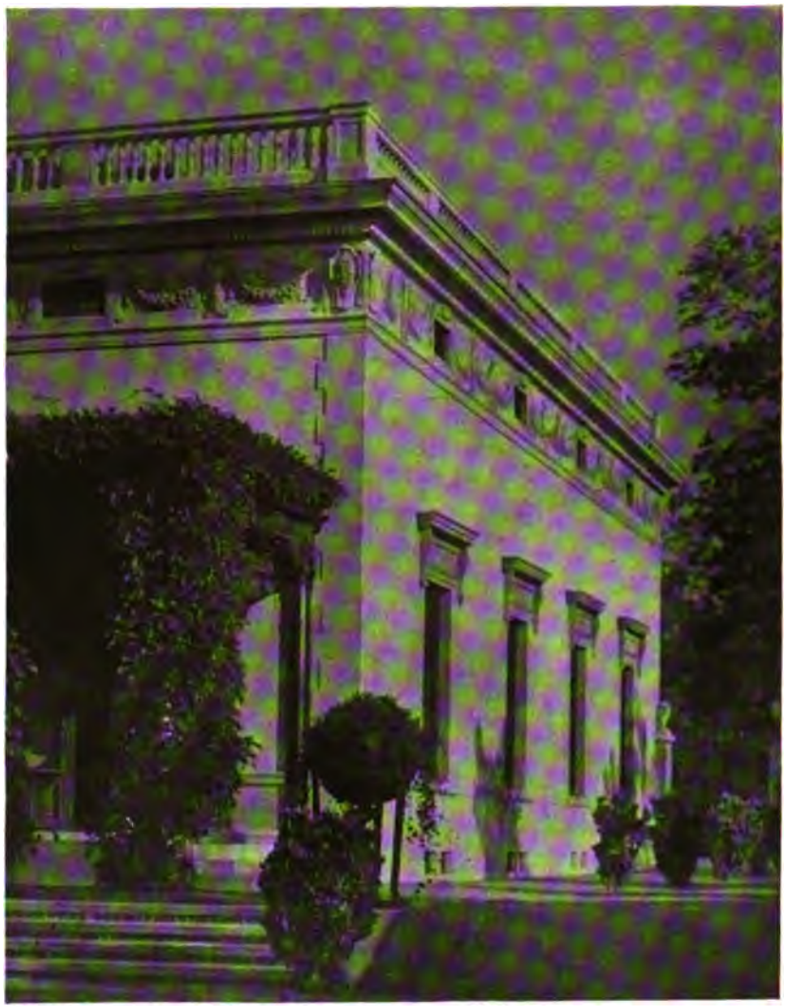
GARDEN FRONT

STUDIO FOR MRS. HARRY PAYNE WHITNEY, WHEATLEY HILLS, L. I.

DELANO & ALDRICH, ARCHITECTS



DETAIL OF WINDOW



CORNER IN GARDEN FRONT

STUDIO FOR MRS. HARRY PAYNE WHITNEY, WHEATLEY HILLS, L. I.

DELANO & ALDRICH, ARCHITECTS



NORTH OR ENTRANCE FRONT

HOUSE FOR GEORGE S. BREWSTER, ESQ., BROOKVILLE, L. I.

TROWBRIDGE & LIVINGSTON, ARCHITECTS



TERRACE OR SOUTH FRONT FROM GREENWAY

HOUSE FOR GEORGE S. BREWSTER, ESQ., BROOKVILLE, L. I.

TROWBRIDGE & LIVINGSTON, ARCHITECTS



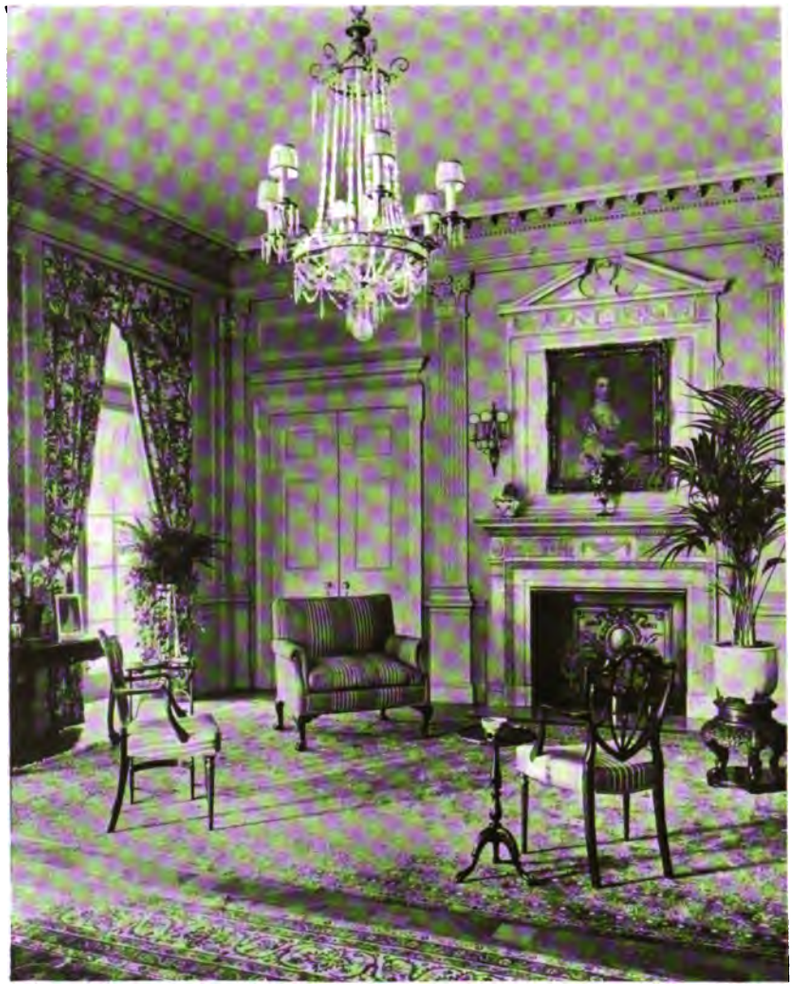
LIVING ROOM



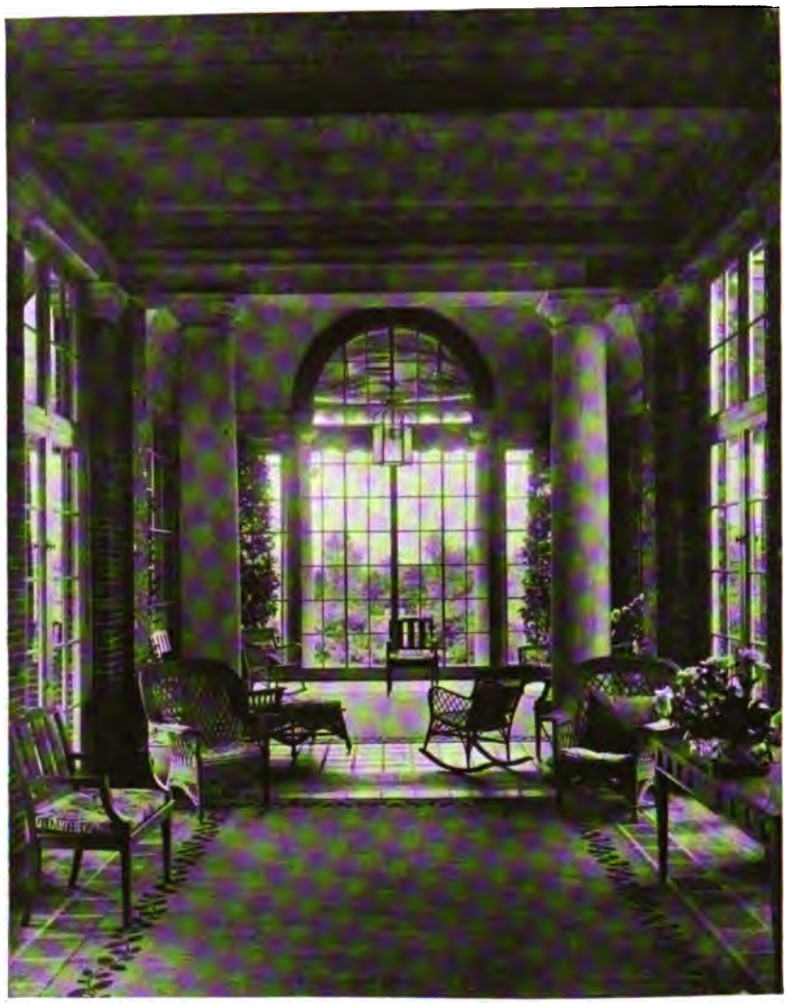
DINING ROOM

HOUSE FOR GEORGE S. BREWSTER, ESQ., BROOKVILLE, L. I.

TROWBRIDGE & LIVINGSTON, ARCHITECTS



DETAIL OF LIVING ROOM



SUN PORCH AND GARDEN VISTA

HOUSE FOR GEORGE S. BREWSTER, ESQ., BROOKVILLE, L. I.

TROWBRIDGE & LIVINGSTON, ARCHITECTS



FARM BUILDINGS

ESTATE OF GEORGE S. BREWSTER, ESQ., BROOKVILLE, L. I.

ALFRED HOPKINS, ARCHITECT



GENERAL VIEW OF EXTERIOR

RESIDENCE FOR WILLIAM SLOAN, ESQ., 686 PARK AVENUE, NEW YORK

DELANO & ALDRICH, ARCHITECTS



LIVING ROOM



DINING ROOM

RESIDENCE FOR WILLIAM SLOANE, ESQ., 686 PARK AVENUE, NEW YORK

DELANO & ALDRICH, ARCHITECTS



DETAIL OF LIVING ROOM FIREPLACE



RECEPTION ROOM

RESIDENCE FOR WILLIAM SLOANE, ESQ., 686 PARK AVENUE, NEW YORK

DELANO & ALDRICH, ARCHITECTS



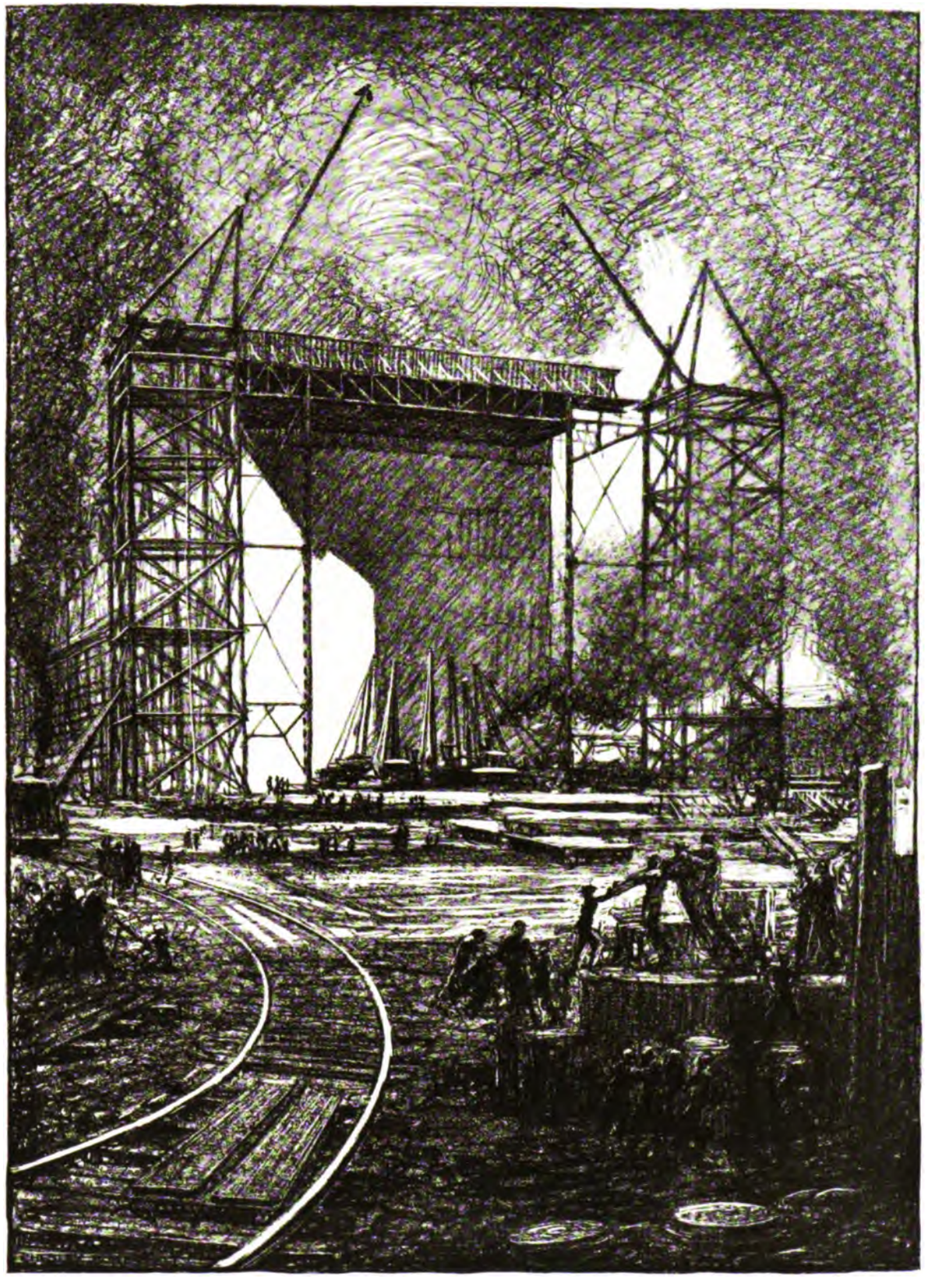
DETAIL OF DINING ROOM DOORWAY



MANTEL AND FIREPLACE IN DINING ROOM

RESIDENCE FOR WILLIAM SLOANE, ESQ., 686 PARK AVENUE, NEW YORK

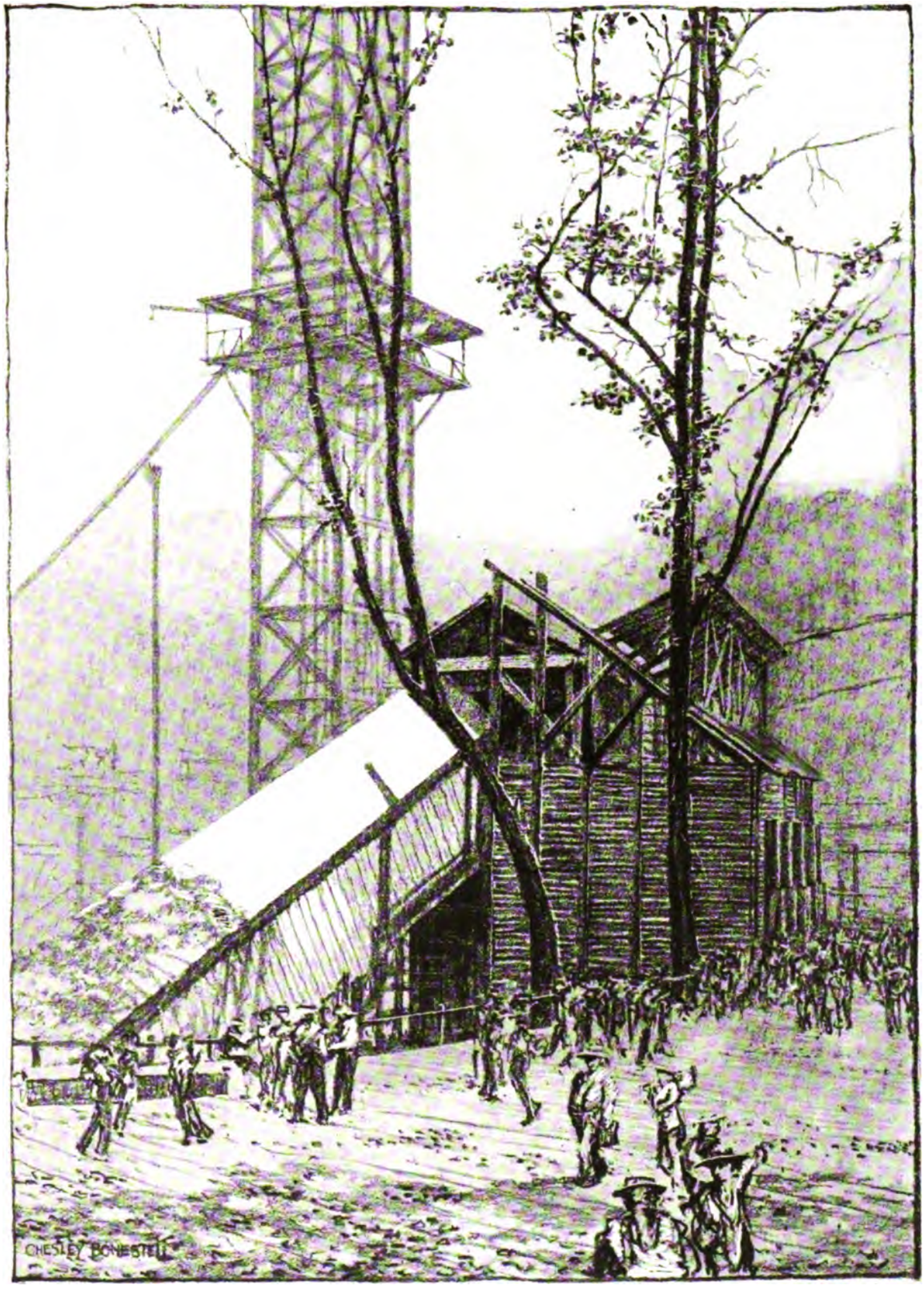
DELANO & ALDRICH, ARCHITECTS



END VIEW OF ABSORPTION-POWER BUILDING

U. S. GOVERNMENT CYANIMID-NITRATES PLANT, MUSCLE SHOALS, ALA.

LITHOGRAPH BY CHESLEY BONESTELL



CONCRETE CHUTE AND ROCK CRUSHER AT POWER PLANT

U. S. GOVERNMENT CYANIMID-NITRATES PLANT, MUSCLE SHOALS, ALA.

LITHOGRAPH BY CHESLEY BONESTELL



DETAIL OF LIVING ROOM DOORWAY
RESIDENCE FOR WILLIAM SLOANE, ESQ., 686 PARK AVENUE, NEW YORK
DELANO & ALDRICH, ARCHITECTS

THE REVIEW OF INTERIORS

Department Edited by J. H. Phillips.





VAULTED CEILINGS OF THE RENAISSANCE

IN creating a distinctive background where may we find more beautiful forms adapted to our modern construction than the interiors with their vaulted ceilings of the Italian Renaissance of the Fourteenth and Fifteenth Centuries?

The palaces of Genoa and Florence, and the villas near Florence furnish us with most beautiful examples of vaulted corridors and rooms, their forms always pleasing and restful to the eye. It is surprising that our architects and decorators do not design more interiors of this type rather than the box-like effect of the flat ceilings which has to be either decorated or beamed. With the vaulted ceilings we feel the form itself, so pleasing that decoration is unnecessary, and, after all, that seems to be the main and first principle of the successful interior of today: to have it a simple background relying for effect on pleasing form and proportion.

The Gondi Palace designed by Guiliamo de Sangallo in 1490 is one of the many wonderful palaces of the Secular Architecture of Florence. By far the most beautiful features of these palaces and villas are their courtyards. These architecturally consist of arches resting

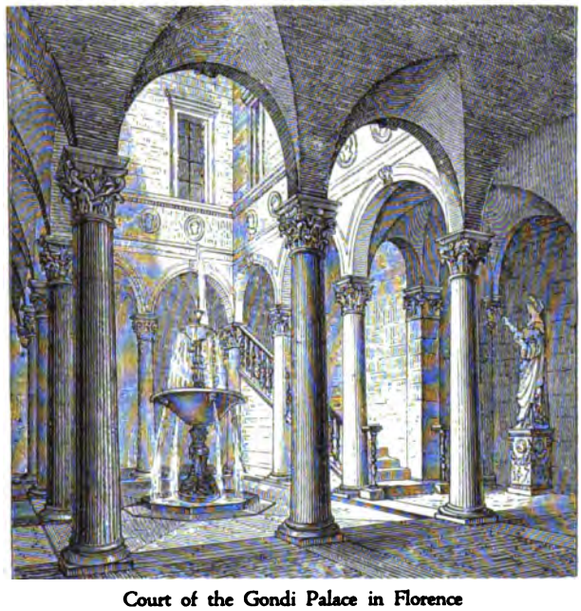


Pair of Sixteenth Century Florentine Wrought Iron Torcheres
One of the most decorative notes of the Florentine Interior



Courtyard of the Villa Curonia

The interior views of Villa Curonia and of Artimino from "Smaller Italian Villas and Farmhouses" by Guy Lowell, courtesy of the Architectura Book Publishing Co.



Court of the Gondi Palace in Florence

on columns. A cloistered court is always and inevitably pleasing, even if not beautiful in detail, and if combined with gardens and scenery beyond, is so poetic as to disarm criticism.

The inclosed court, enchanting in Italy—some will say, "That it loses its magic charm in our American homes; we should have an American type; the court is only adapted to tropical climates." If more of our city homes, for example, had good examples of the cloistered court idea, make it American and as individual as you like. I think we all admit that most our homes are rather stupid. We are apt to follow the so-called smart fads of the day, rather than using imagination which will result in more individual interiors that have beauty and romance.

Villa Curonia has the beauty of romance, with its charmingly simple, two-storied arcade, a Fifteenth Century cortile of wonderful proportions. Raphael, the great painter, is said to have occu-



The Room in The Villa Curonia which the Great Artist Raphael is said to have occupied



Room in the Villa Curonia



Interior of Artimino



Interior of Artimino; the Billiard Room



Dining Room in the City Residence of Mr. E. G. Fabbri
Designed by Fgisto P. Fabbri
Grosvenor Atterbury, Architect
Decorated by John Olin

pied the vaulted rooms. The photographs convince one that a more perfect setting for tapestries, pictures and carefully selected furniture could hardly be possible. Quite true to the Tuscan style which was created by "the great artists whose genius inspired and dominated the Italian Renaissance, and who were above all realists, seeking rather for beauty of form and for harmonies of arrangement in their poetry and in their art."

Style in architecture and interior decoration is a language which is becoming more and more understood with Americans of culture and fashion. Most of our interiors have too much architecture and too much interior decoration. What we should have is beautiful form and proportion, more charm, individuality, and imagination. The illustrations show this, and how extremely simple they are, yet how rich they appear when properly furnished.

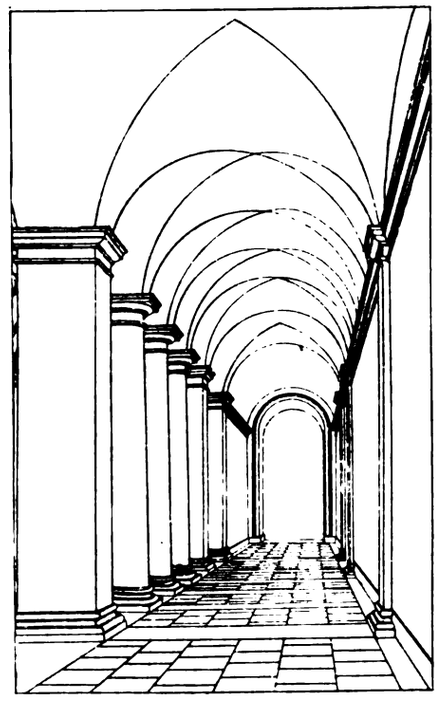
It is most interesting to note in the photographs of the work of modern architects and decorators how well proportioned vaulted rooms are adapted to our modern requirements. They also serve as a perfect background for our furnishings of today and, most important of all, they give us some of that beauty of romance and charm apparent in the work of the artists of the Fifteenth Century.

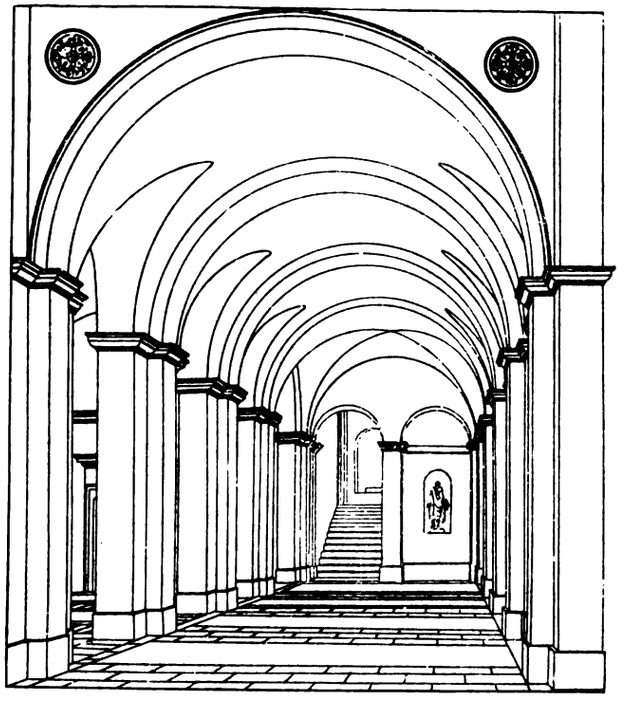


Room in the Villa Curonia shows a wonderful background for individual and distinctive furnishings



Arcade Hall of Founders Court, American Academy at Rome
McKim, Mead & White, Architects







Corridor Leading to the Sun Room, Residence of
Walter T. Rosen, Esq.



ENTRANCE HALL

RESIDENCE OF JOHN INNES KANE, NEW YORK CITY

McKIM, MEAD & WHITE, ARCHITECTS



VIEW OF MAIN HALL FROM DOORWAY OF DRAWING ROOM, SHOWING DOORWAY TO DINING ROOM

THE RESIDENCE OF WALTER T. ROSEN, ESQ.

J. H. PHILLIPS, ARCHITECT



MAIN HALL. SECOND FLOOR. VIEW OF THE MAIN STAIRS SHOWING THE SPIRIT OF THE FLORENTINE PALACE AMERICANIZED

THE RESIDENCE OF WALTER T. ROSEN, ESQ.

J. H. PLILLIPS, ARCHITECT

MUSCLE SHOALS—A NEW INDUSTRIAL TOWN IN ALABAMA

EWING & ALLEN, ARCHITECTS

By RALPH F. WARNER

THE new town of Muscle Shoals, on the Tennessee River, about ninety miles northwest of Birmingham, is one of the largest of the war emergency developments. It was built by the Air Nitrates Corporation of New York, for the Federal Government, for housing employees in a plant recently completed nearby where ammonium nitrate is manufactured from the air, for use in explosives. There are approximately 1,500 houses in all, about equally divided between white and colored sections. They are one and two stories in height, with from two to eight rooms each. As one of the primary requirements in the development of the town plan was that the white residents should be separated from the colored, the layout has been devised from the first with this objective in view. A small valley not suitable for building afforded a peculiarly happy means for meeting this need. The streets throughout play together, however, in the direction of a common town center. Houses for white are located mainly on lots 50 by 100 feet in size, and for negroes on lots 46 by 75 feet. Setbacks of 16 feet from the lot line have been adopted for all houses, with a minimum distance between houses of 20 feet. Streets are 40 to 70 feet in width, the majority with 40 feet width.



Type 44—Six-Room House

About half of all the dwellings are one story in height, and in these the architects for the development have made a distinct contribution in plan and design. Many of the one-story



Bird's-Eye View of Town Plan

Ewing & Allen, Architects and Town Planners



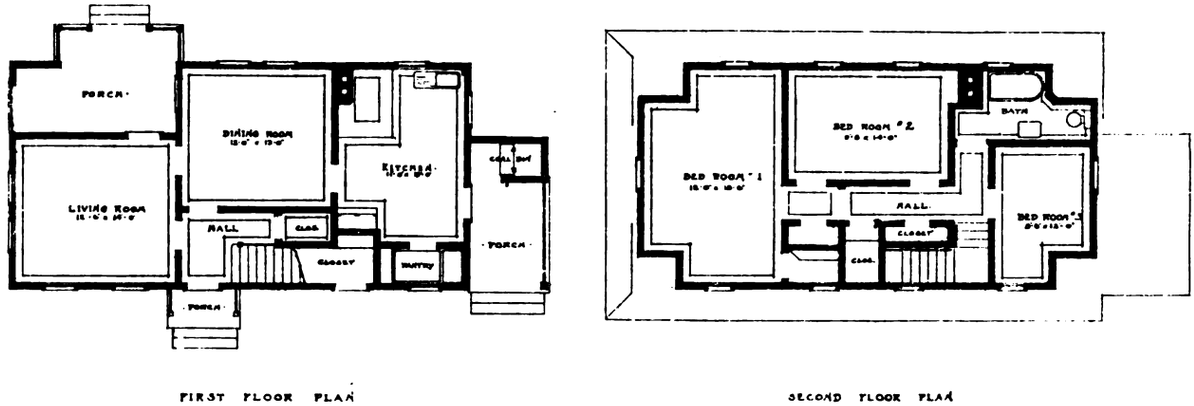
Group of Two-Story Houses at Muscle Shoals

dwellings in the white section are repeated in the negro section, the only differentiation being that where the houses are designed for negroes the studs are exposed, while in the white section the walls are plastered. The houses with from six to eight rooms are designed to provide those conveniences which are found in much more expensive houses. Variations in exteriors in all of types are obtained through the use of both stucco and shingle wall surfaces and in roof construction.

Considering the houses from the standpoint of architectural treatment of exteriors, there are, in the two-story houses, three variants, supplemented by three reverse types. Of the three-room houses there are five variants, supplemented by three reverse types and three types in which stucco or hollow tile is used instead of frame. Two of the variants in four-room houses have practically identical floor plans and differ very slightly in elevation. The five-room houses, for whites only, show five variants supplemented by four reverse types and three types in stucco and hollow tile identical with types in frame. Two of the variants are of identical plans with a differentiation in elevation only in the location of porches.

It is obvious that in the building of a large number of houses at minimum cost, great savings can be made in the cost of millwork and in other details of construction if these are ordered in standard sizes and in large quantities. The architects have followed this course with marked success. Thus two or three standard sizes for window sash only are used in the entire 1,500 houses. All of the front doors were of the same size. Shutters are of three types only. Hardware for the entire community, including all the public buildings is of the simplest possible kind and practically uniform throughout. Lighting fixtures, ranges, plumbing and other materials are uniform.

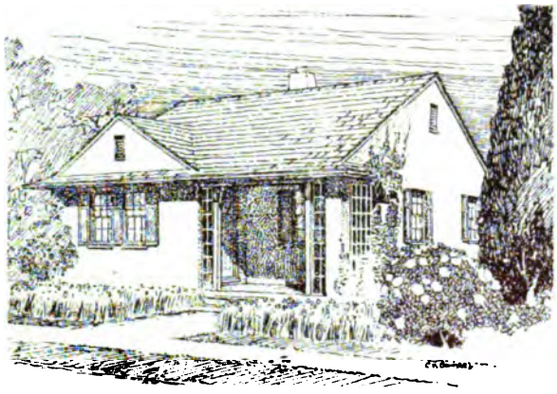
The whole project is being carried out with the idea of fabricating the houses in the same way that standardized ships for our new merchant marine are being fabricated. There are no full sized details. Instead, the architect has prepared a set of sheets about 9 in. x 12 in. in size for each and every detail necessary for the construction of the houses. These show standards for millwork, hardware, plumbing, fixtures, heating, installations, etc. They are supplied to contractors and subcontractors, millworkers, and others. The



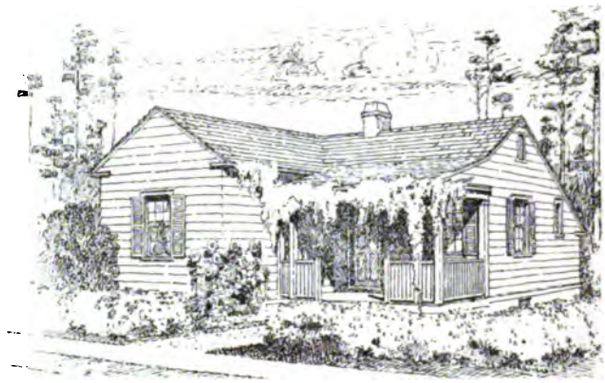
FIRST FLOOR PLAN

SECOND FLOOR PLAN

Floor Plan, Type No. 44—Six-Room House



Type 15—Four-Room Bungalow



Type 19—Four-Room Bungalow, Unplastered

saving in drafting expense, in milling, in manufacturing, and especially in the erection through this method is one of the important features of the enterprise. The same plan for detailing materials was adopted by the Bureau of Housing and Transportation for the Department of Labor and by the Housing Bureau of the Emergency Fleet Corporation.



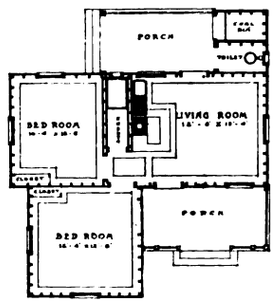
Type 54—Five-Room House

It was realized that in the judicious use of color, the development could be given much character and charm without any additional expense as would make it more attractive than a place where the painter is turned loose as is common in most towns. Color schemes are devised in 28 different combinations. Each of the 28 combinations includes a color for the walls, for the trim, for the shutters, front door, roof, window sash and porch floor and porch ceilings, eight tints being used for each house. In general, a cream color is the predominating note in the wall surfaces with shades of brown, green and red predominating in the other parts of the house.

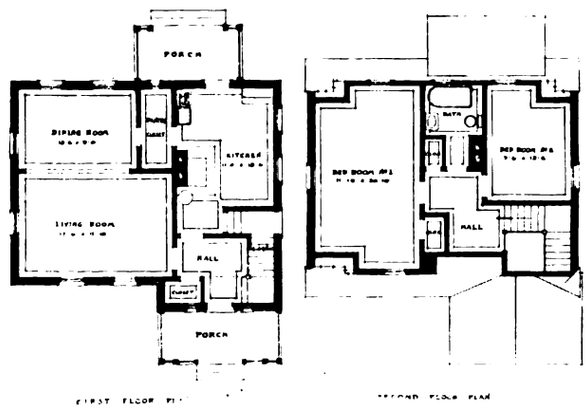
For each of these types of houses, plaster models at 1-16 in. scale were made. The study of group effects on flat surfaces and the use of paper and pencil would have been an unending task, where hundreds of houses were to be arranged on 40 to 50 blocks. Much greater speed in the working out of group effects and more variety and more harmony was obtained in the ultimate result by a three dimension study of group effects with the models.



Floor Plan—Type 15



Floor Plan—Type 19



Floor Plan—Type 54

DEVELOPMENT FOR THE UNITED STATES HOUSING CORPORATION AT QUINCY, MASS.

JAMES E. McLAUGHLIN, ARCHITECT

HERBERT J. KELLAWAY, TOWN PLANNER

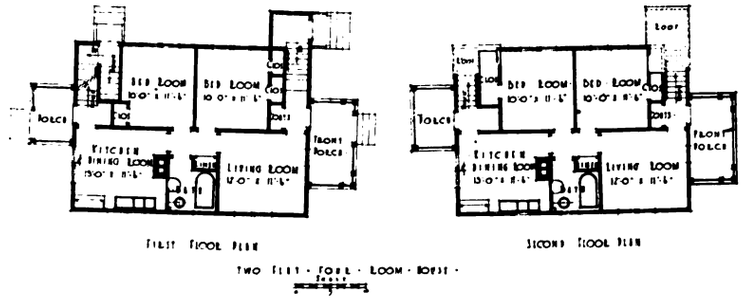
UNDER the pressure of war urgency the rapid expansion of the Fore River Shipbuilding Corporation's plant at Quincy, Massachusetts, and the consequent additions to its working force, created an alarming shortage of housing accommodations that was brought to the attention of the United States Housing Corporation directly following its organization in the late spring of 1918. As in other places where the welfare of Army and Navy contracts has been concerned the Housing Corporation immediately took the problem in hand. As has been noted in previous articles upon the work of the Housing Bureau its policy is first to help the workers to find satisfactory homes through its Homes Registration Service or through adjustments in transportation facilities and schedules. When these methods prove inadequate,—as was the case at Quincy, where rooming, housing and transportation possibilities were soon exhausted,—the Real Estate, Design, Construction and Operating Division are called into action in their proper sequence in order to provide, as soon as possible, a sufficient number of wholesome homes in which to house the workers not otherwise provided for. This, in brief, is the "modus operandi" of the Bureau as expressed by its President, Otto M. Eidlitz.

That the efficiency of workers in any industry is seriously lowered by excessively congested and unsanitary living conditions, and by tedious journeyings morning and night, is a fact that is well understood. In cases where construction is found to be the only procedure that will offer relief it is well not to overlook the fact that immediate relief is not possible. After the operations of investigating and procuring sites are completed the problems of the layout and design of the project by the Committee of Design, —consisting of an architect, a town-planner and an engineer,—must receive serious and deliberate consideration. It may be said however that the preliminary stages, as well as the actual construction, of the war-time developments have been carried on with a degree of speed that would have been thought impossible in pre-war days.

The architect of the Quincy project is James E. McLaughlin of Boston, who has co-operated with Herbert J. Kellaway, of Boston, town-planner, and Ernest W. Branch of Quincy, engineer. The construction work is being done by the Casper Ranger Construction Company of Holyoke, Mass. The problem which confronted the town-planner at Quincy differed materially from many of the projects which thus far have attracted so much public notice. This was not a case where a new town-site was to be developed from the raw. There was no large open tract that could be converted into a new village. The best that could be done therefore was to take over such open areas as had not been developed beyond



Typical Street Scene



Two-Flat Four-Room House

a few lines of speculative street stakes and a "For Sale" sign or two.

Four plots were finally selected, one of which has been used for the temporary buildings (Project No. 62-B). It is with the other three tracts that we are concerned in this description. These are known as the River Street, Arnold Street and Baker Basin tracts.

The land has been so sub-divided as to furnish each home with an average of 5,000 square feet, and no opportunity has been lost to make the most of natural features. On the Baker Basin tract, for instance, a street has been carried entirely around the tract, so that the houses along the rear may face the water, giving to everyone at the same time free access to the six hundred feet of beach. Trees and shrubbery will be planted along the terrace above the beach on the water side of the street, comfortable benches will be provided, the beach itself cleaned and improved, and a boat landing made in a little cove at one end. Out on the Washington Street side of this land there is a bowl-like depression, at present a catch-all for every sort of rubbish that people in the neighborhood wish to rid themselves of. This is to be filled in and converted into a little park where the smaller children may romp, free from the dangers which threaten them when there is no playground other than the public street.



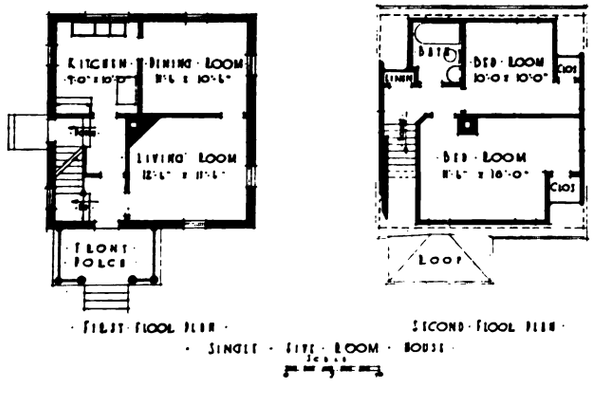
Five and Six-Room Houses

In planning the Arnold and River Street developments it was found that the county and city had in hand a most desirable scheme for building a new southshore motor road which, before the war forced a modification in all such enterprises, they had hoped to open and dedicate in 1920 as the Pilgrim Parkway. One of the routes for this roadway led from the Quincy Short Reservation of the Metropolitan Park system directly across the territory that the Government intended to develop. Arrangements were made so that the Government and local plans would complement one another and as a result a splendid motoring road will swing across the River Street tract in a graceful curve, and will bound the Arnold Street development along its entire eastern frontage. These sections of the parkway will be ready for dedication long before the year for celebrating the three hundredth anniversary of the landing of the Pilgrims, for the Government will construct them as a part of its street system.

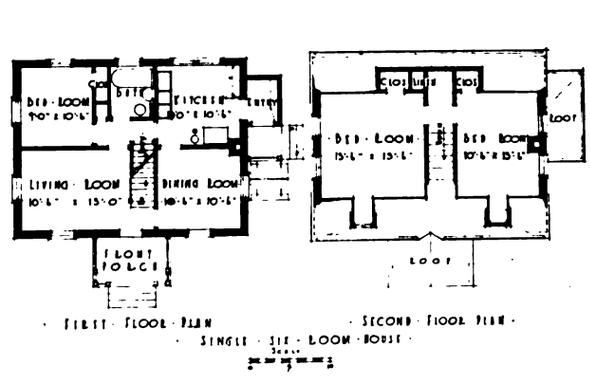
Although the Arnold Street property is very close to the shipyard, yet the roar and tumult are scarcely audible there, thanks to the happy interposition of a little rocky and oak-clad hillock that is a part of the tract.

A total of 256 buildings is being built on the three tracts. There are ninety single houses (mostly of 5 and 6-room units, and 3 of 8 rooms), 57 semi-detached houses (4, 5 and 6 rooms) and 109 two-family flats (4 and 5 rooms), accommodating in all 422 families, or about 2,120 persons. All of the houses will be heated by warm-air furnaces, and equipped with electric lights, gas ranges, and automatic water heaters.

While a very few types of plans have been used yet a great variety of appearance has been ob-



Single Five-Room House

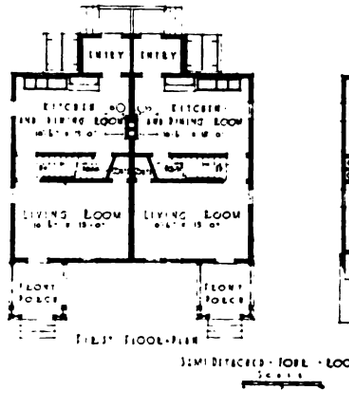


Single Six-Room House



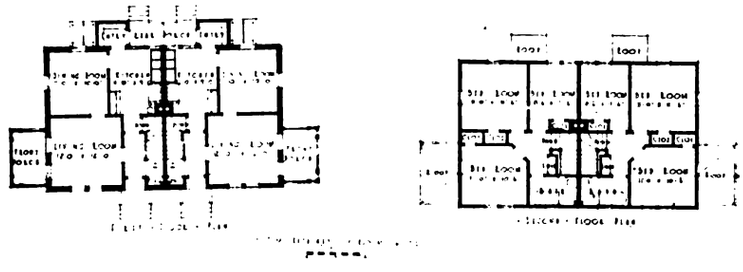
Semi-Detached Houses

tained by the use of varying types of roofs, porches and other external features, such as clapboards here and shingles there, with some few brick houses. Green blinds, with red or green asphalt shingle roofs, have been used to give the necessary contrasts of color. Simplicity of line and decoration has been the keynote of the designs and they have been modelled very appropriately, after those fascinating relics of the Old Colony which one sees in the villages of Norfolk and Portsmouth counties. Nor will the similarity end with mere external appearance, for every effort will be made to make these new houses as sound and enduring as their venerable prototypes.

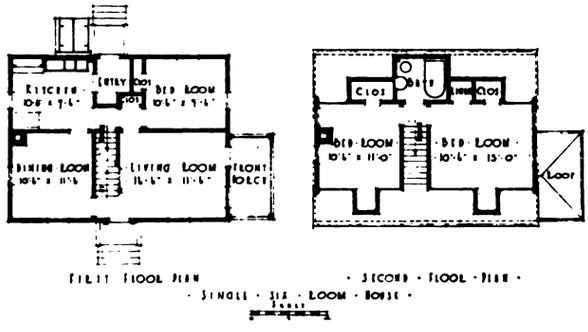


Semi-Detached Four-Room House

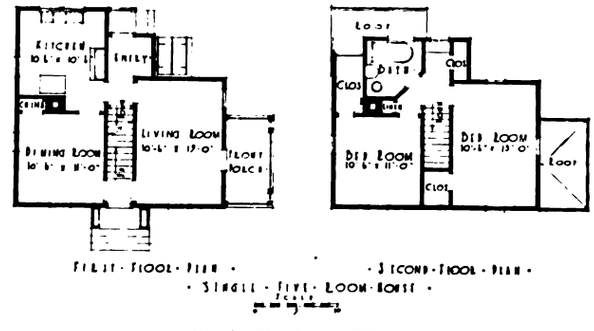
The abrupt cessation of hostilities found the housing development at Quincy in a partially completed state. However the need of ships still exists and with the deferment of action by Congress the houses will soon be finished, if indeed the shipworkers have not found them ready for occupancy before this article reaches its readers.



Semi-Detached Six-Room House



Single Six-Room House



Single Five-Room House

EDITORIAL COMMENT ON ARCHITECTURE & THE TIMES

OUT of the war have come various influences which betray themselves in uneasiness in the activities and expressions of individuals in various walks of life. People have been shaken out of their customary train of thought—or thoughtlessness—and many find it difficult to absorb the truths made evident by new situations. Pessimism, even bolshevism, find an easy grip on those who, in the present chaotic state of international affairs, are floundering in doubts or hoping to grab some advantage out of a situation that offers possibilities for an upheaval. Our task as individuals is to concentrate upon the new problems that are presented, to confer quietly on ways and means to co-operate in sensible courses of action, and to avoid throwing fuel on bolshevik fires by ill-considered speech and unwise act.

To prophecy now what the future may hold is beyond the ken of even the wisest. But the dullest can hardly fail to appreciate that our country, the richest, strongest, most solvent, most active and most independently placed nation in the world, cannot do else in the days to come than go forward to levels which, in days preceding the great cataclysm, seemed hardly justified, even by our hopes. Let us remember, too, that our fate is bound up in the fate of our country, and that others will form their estimate of what the future holds for all of us, by the measure of our hopefulness and courageous action.

Never before have our financial institutions been so well-stocked with funds. The people of the country are rich. While the Federal Government has issued credits for billions, it has borrowed from a people who have recovered most of the money in commerce and industry, and who now hold the bonds which are drawing interest. Timidity in banking circles seems to be prevalent —yet an examination of the facts hardly justifies that attitude of mind, and certainly the best interests of the country do not receive their just measure of support in that way. The fact is that these United States have been held back too long in their normal domestic development, and in their present cramped conditions are calling for new facilities, new construction, opportunities for better living and broader fields for commercial activity and industrial pursuits. The 100,000,000 individuals of this country want more railroads, more buildings, more houses, more schools, more churches, more farms, more of everything that brings comfort. And the question may well be asked, why shouldn't the people have what they want when they have the money to buy it.

Many are still living in the state of mind engendered by the uncertainties of war—by days, or more properly years, when the battle line swayed back and forth, stirring within us emotions hardly calculated to foster a spirit of enterprise and forward-looking, which is the great need today. Those fearsome days are past, and while there are timid souls still attributing strength to the German Empire, the truth is unmistakably written in signs which the wise can hardly overlook, that another war by the Germans is out of the range of possibility, and that no other people will start a war that need bother the United States.

What is needed today is an appreciation of the fact that our country is still intact, bigger and richer than ever, with greater prestige abroad and greater markets both at home and abroad than ever before. Out of the horrors of the war, the United States has come forth one of the victors and shared in gains which are out of all proportion to what she has lost. The commerce of the world is open to us, and the losses in trade which the downfall of Germany may bring about, are more than made up by the opportunities opened up by the new and better markets furnished by the liberated nations. We must cultivate the desire for prosperity, release ourselves from the festering notions of drastic political changes, cast off doubts as to peace settlements and foreign questions, take our place in the world of business and industry, with the determination to achieve in directions in which we are best fitted to serve, and show results by honest endeavor coupled with enthusiasm and courage.

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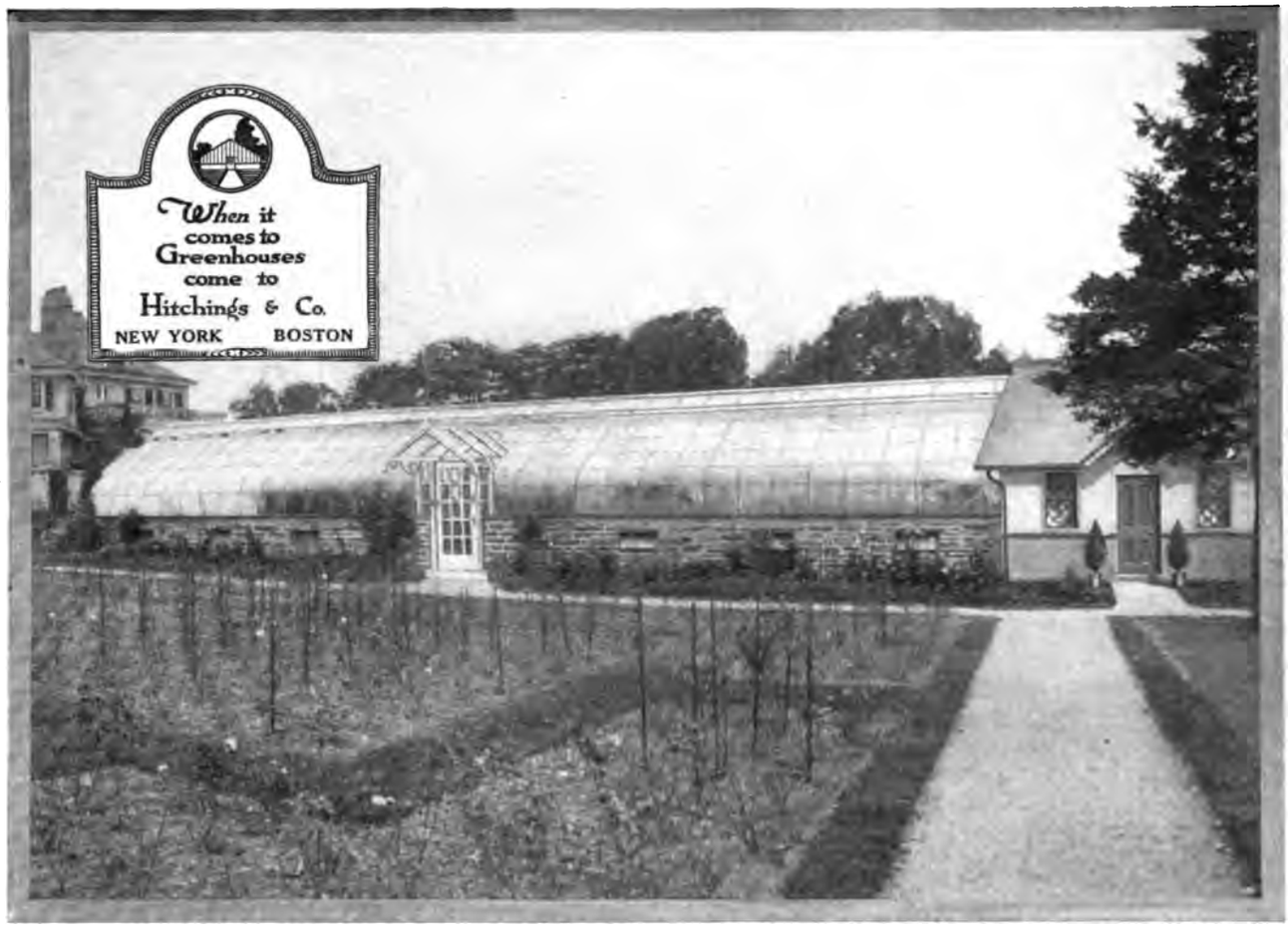
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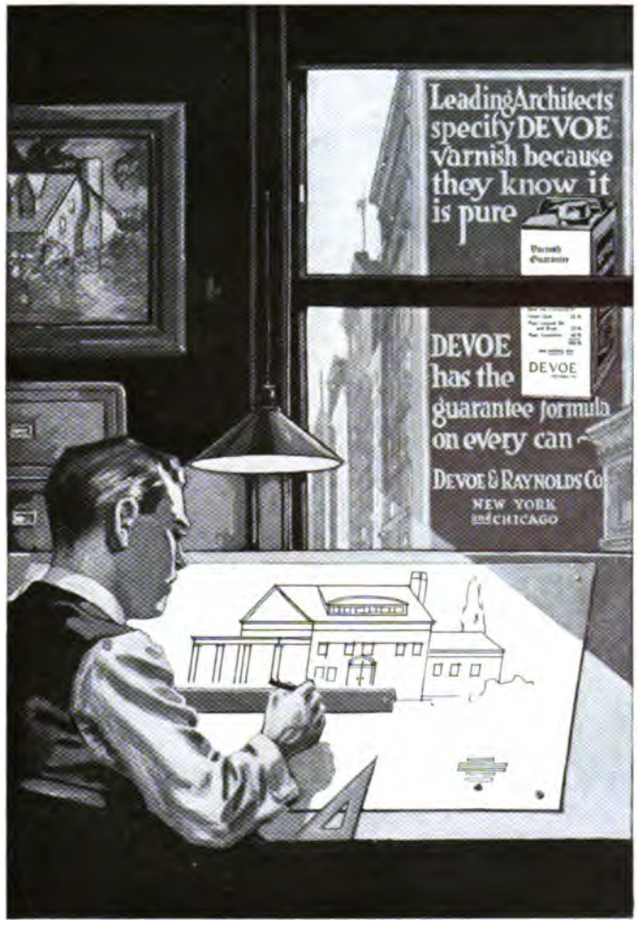
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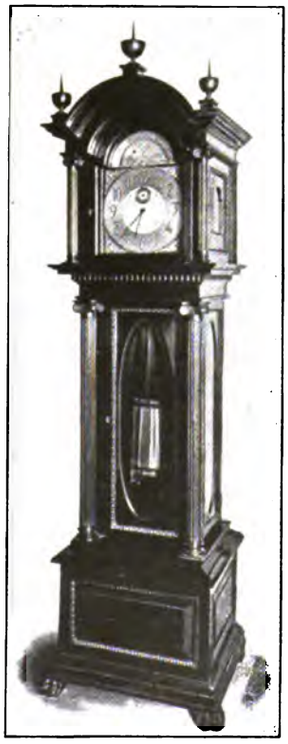
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Professor of Architecture, Cornell University

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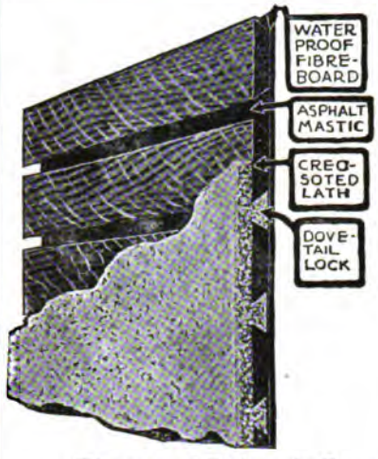
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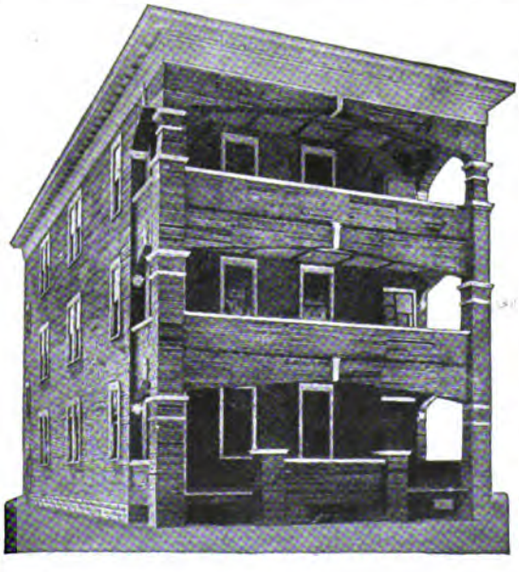
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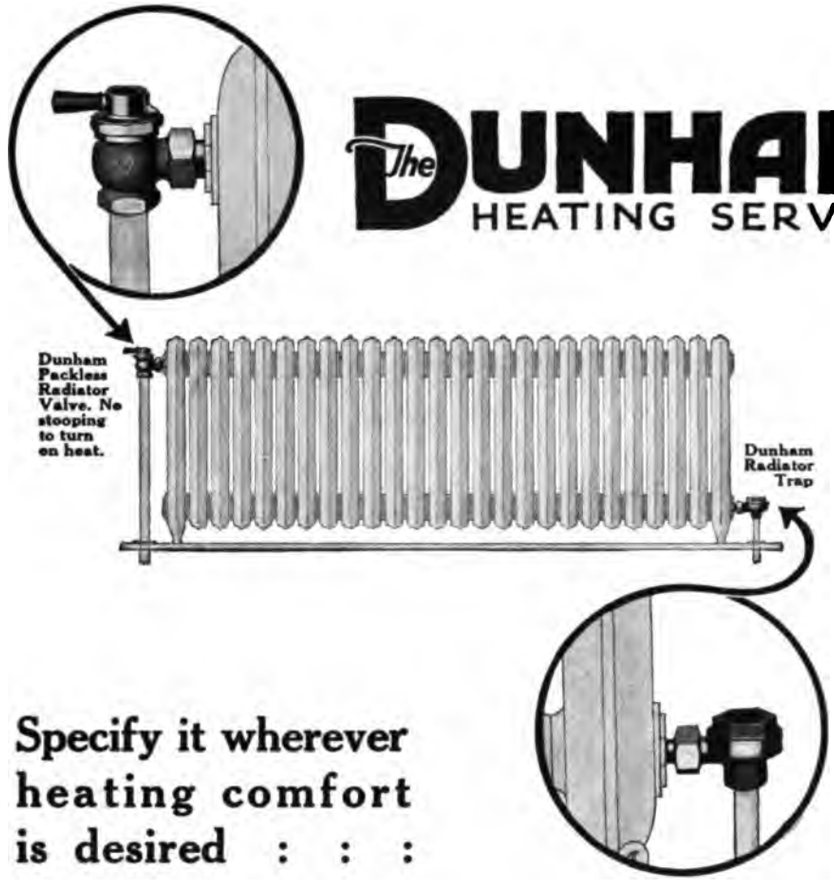
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All Architects and Builders should have our book, "Built on the Wisdom of the Ages." It describes and details the use of Bishopric Board; illustrates homes and institutions on which it has been used; tells how to get perfect Stucco work. It contains reports of scientific tests and letters from engineers, architects, builders and home owners. Get it—and samples of Bishopric Board and Bishopric Sheathing.

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Vol. VIII, No. 2 THE ARCHITECTURAL REVIEW February, 1919
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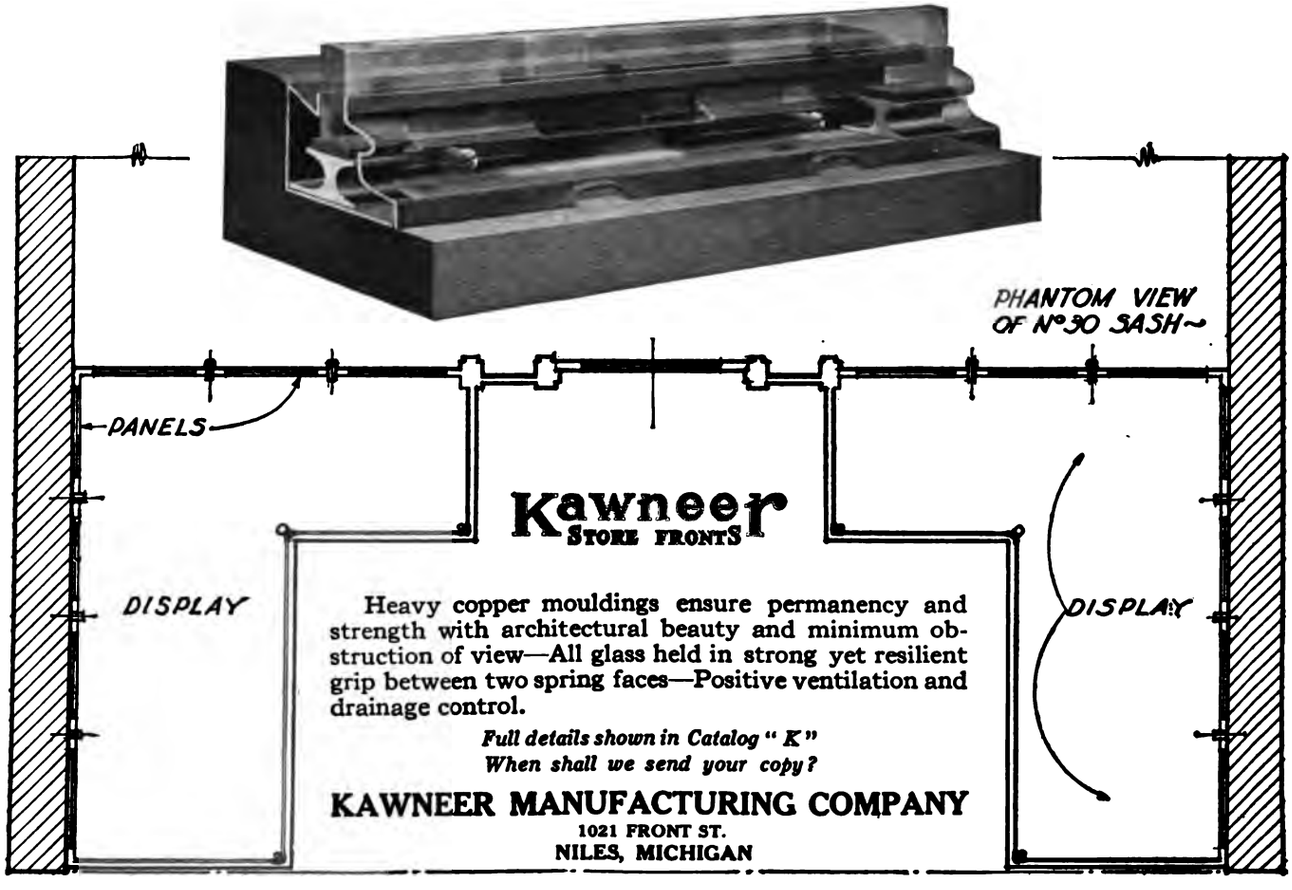
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VOL. VIII, No. 2 February, 1919

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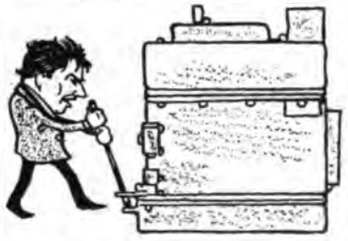
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Grate burn outs— A preventative

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Which in turn, ends chat number 14 with approximately 4 more to follow.

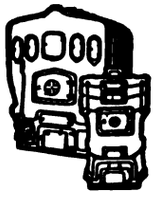


Another thing in favor of half the grate shaking at a time—you can run half the fire at a time.



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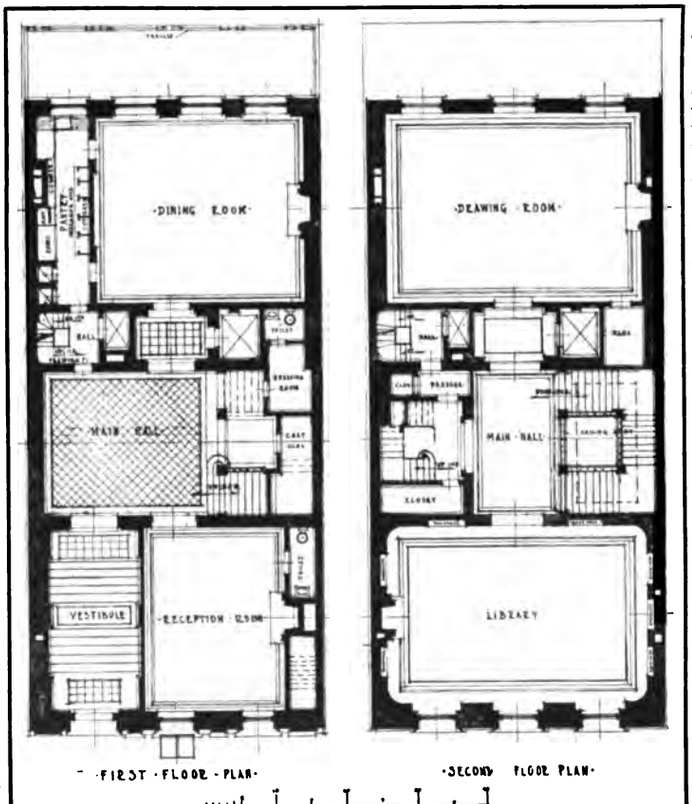
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HARDLY any citizen of the United States can have any other feeling than a sense of pride at the achievements of the Philippine Government in the last two decades in the development of the schemes for the housing of the administrative offices and of the various state and municipal departments. Surveying the work that has been done by the several consulting architects engaged by the successive administrations for the planning of cities, towns and individual structures, one is greatly impressed by the seriousness and scale with which operations have been conducted. Starting with the magnificent proposed Capitol development at Manila, with its buildings now completed and its features planned or under way, and down through the various buildings in state centers and municipalities, there is a dignity and breadth contrasting greatly with the work under Spanish domination. One is apt to ask, however, why the style adopted for the various buildings and groups reflected so little the influence of regional architecture. The intelligent native of the Philippines doubtless feels a sense of pride in what the country had to show in the way of architecture before America took over the reins of government. To extend and develop this type of architecture might seem to many a reasonable course and would certainly tend to stamp our policy in the Philippines with that which has long been claimed to be the real intent, viz., to foster the best ideals of the people themselves and not to suppress the expression of native ability. Apart from this point, however, no one could question the success that has attended the efforts of the architects of the Insular Government. Their work shows good taste and the adaptation to function that is characteristic of the better American monumental architecture. It is, however, refreshing to find that certain of the private buildings illustrated reflect Spanish influence, which seems to adapt itself more fittingly to the atmosphere of the Islands.



Floor Plans, House for John S. Rogers, Esq.
Trowbridge & Livingston, Architects

In Mr. Philipps' series we have, in this number, an interesting historical outline of the development of stage scenery and settings, from the day of the miracle and morality plays down to modern times, illustrating clearly the advances that have been made in exploiting the possibilities of the interior decorator's art for the advancement of the drama.

So much of the industrial housing work under way for the Federal Government has been shown in sketch form that many have grown impatient in waiting for illustrations of actual accomplishment. We are fortunate in being able to publish in this issue a completed development for the Ordnance Department, and one whch has been developed with unusual success.

The town house by Messrs. Delano & Aldrich illustrated in the plate section is indicative as to type of the work of this firm in general and, like the house by the same firm in the January issue, suggestive of the New York of earlier days, with, however, considerably more elaboration on the court facade.

The house by Messrs. Trowbridge & Livingston, also illustrated in the plate section, is interesting because of the beauty and dignity of the decorative effects secured in the style of Louis XIV.

The house at Scarsdale by Mr. Charles A. Platt is of the simplest possible type, but quite pleasing both in its exterior and interior handling. The interior decorations are by Miss Virginia Swift.

We start in this number a series of valuable articles by Mr. J. F. Musselman, consulting engineer, covering the subject of "Equipment."



PERSPECTIVE VIEW

PROPOSED CAPITOL GROUP, MANILA, P. I.

G. CORNER FENHAGEN, ARCHITECT

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The
ARCHITECTURAL REVIEW
Volume VIII | Old Series Vol. XXV | Number 2
FEBRUARY 1919

THE STORY OF AMERICAN ARCHITECTURE IN THE PHILIPPINES

PART I

By RALPH HARRINGTON DOANE, A. I. A.
CONSULTING ARCHITECT TO THE INSULAR GOVERNMENT, 1917-1918

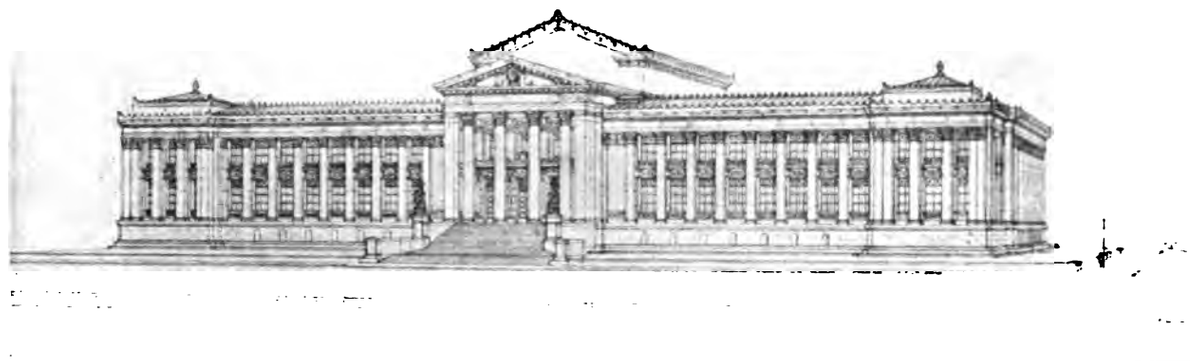
THE architecture of Spain in her Colonies the world over announced the extent of her dominion as unequivocally as did the Spanish flag. Her missions and cathedrals, constituting the so-called Spanish Colonial Architecture, will permanently record the wanderings of Spanish explorers, their discoveries, and the conquests of the Kingdom of Spain as infallibly as do the written pages of history.

If the architecture of the Philippines is to fittingly reflect the political transitions, American Colonial Architecture to be distinguished of course from Georgian work, must unmistakably indicate to posterity the Era when American democracy surplanted the exploitations of Spanish despots.



Sketch of the Recoletos Church, Manila, P. I.
Ralph Harrington Doane, Architect

Here lies our first opportunity as a great nation to inaugurate a real colonial architecture. That the Government in this remote insular possession of ours has been developing such a style with creditable rapidity by means of a well balanced architectural and engineering organization of very considerable proportions, and that the Philippine Islands afford an inspirational field for such a development is not realized by the profession which this fact would not fail to interest in ordinary times, for reasons to be subsequently set forth, much less in these strange days when our sympathies have broadened and our considerations easily



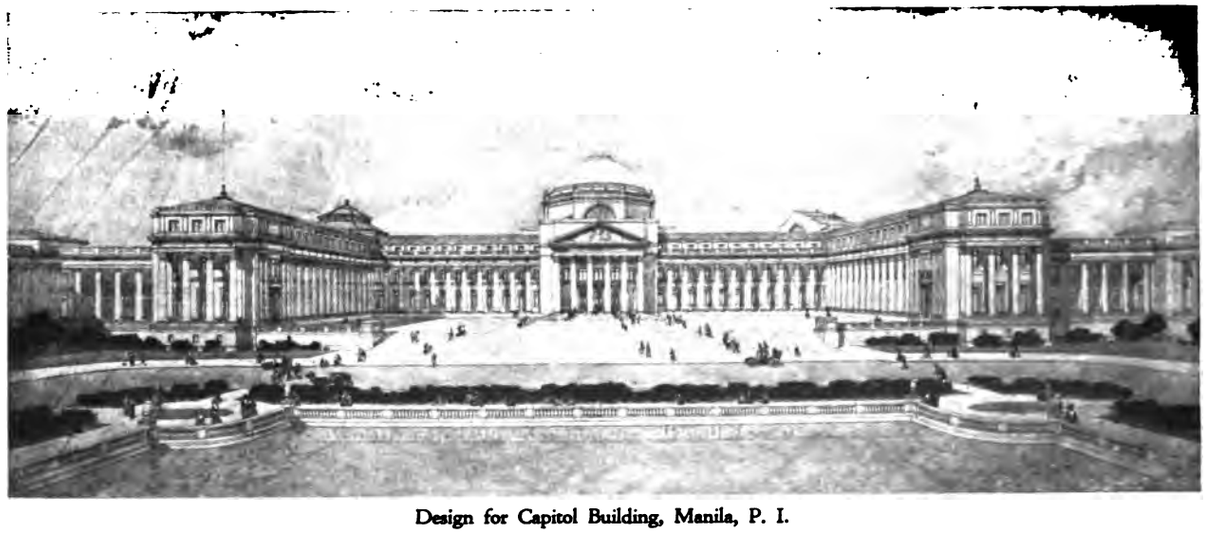
Insular Government Building, Manila, P. I.
Ralph Harrington Doane, Architect

reach the uttermost parts of the civilized world.

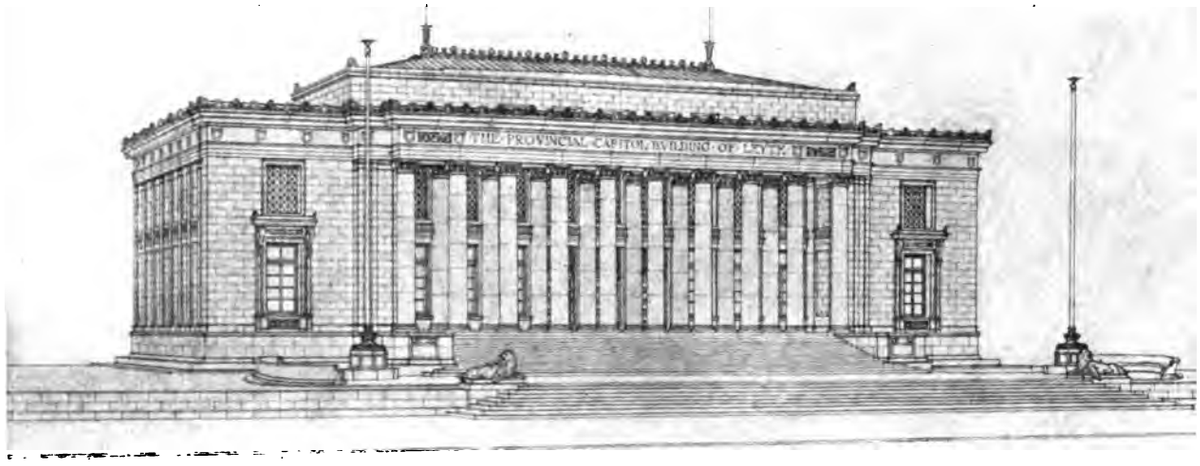
Government architecture in the Philippines has not only in point of theory but in point of actual fact been free from political machinations and literally controlled by the Consulting Architect, better titled the Government Architect, who is by law required to pass upon all Government buildings, as well as upon certain city planning projects, whether insular, provincial or municipal and who, with an office force of over fifty employees, prepares designs and plans for as many of them as possible. Buildings have during the last three years been constructed principally by administration through the Bureau of Public Works, whose field or district engineers as they are called are stationed in all provinces.

The annual appropriation for Insular Government buildings is made by the Legislature in one lump sum with possibly several of the most important projects definitely mentioned, but the subdivision of the general appropriation to specific jobs is left to the Director of Public Works and the Consulting Architect, who with such latitude can apply funds saved on one building to another that has exceeded the estimated cost. Such a method of appropriating is flexible and has worked admirably during the war when the cost of construction has fluctuated so greatly. It has in fact made it possible to complete a series of important and much needed public buildings even during the chaotic market conditions that have existed for several years.

Architecture no more than commerce can be indifferent to new markets. That the Philippine Islands, and the Orient for that matter, may prove in time a new and fertile field for the architect's



Design for Capitol Building, Manila, P. I.
G. Corner, Fenhagen, Architect



Provincial Capitol Building at Tacloban, Leyte, P. I.
Ralph Harrington Doane, Architect

effort is not inconceivable to those who have been there. In the first place these lands abound in stores of untouched natural resources. In the second place, right or wrong, it is nevertheless a fact that American and European styles are the vogue, in oriental countries; and in the third place American architects in business in the United States now actually have lucrative commissions in the far East. Furthermore, various American construction companies and sellers of building materials have successfully established their agencies in these remote parts, over 10,000 miles distant from their home offices. This condition of affairs makes the story of American Architecture in the Philippines pertinent and interesting to the profession at this time.



Main Facade, Provincial Capitol Building, Lingayan, P. I.
Ralph Harrington Doane, Architect

Some general idea of geography is necessary before the possibilities of this archipelago can



Facade toward the Lingayan Gulf, Provincial Capitol Building, Lingayan, P. I.
Ralph Harrington Doane, Architect

be fully realized. The Philippines are not, as is frequently supposed, a group of Southern Pacific sand bars. On the contrary they consist of several hundred very beautiful mountainous islands, extending about a thousand miles in length, lying approximately in a line between Japan and the East Indias with the China Sea separating them from the coast of Asia. They are rich in luxuriant tropical vegetation and possess rare specimens of natural grandure. An interisland voyage among them is comparable to a trip through the Inland Sea of Japan with the added beauty of magnificent natural illumination, for the tropical sun is a more gorgeous sun by far than is ever seen in temperate climes. The low-lying solar displays of the temperate zone, that seem to hug the horizon so close, are tame in comparison. A sunset seen from New York looks as though it was really taking place at San Francisco, but in equatorial regions the sun sets right where one happens to be. Great banks of fluffy white clouds sail up from the immediate horizon high into the heavens, and lighted by flashing golden shafts, and played upon by a galaxy of colors gorgeous beyond description, seem to form a gigantic canopy of nature's most marvelous stuff, shutting out all the cold world beyond and producing effects which are of great importance in architectural design.

Wonderful roads, the fruit of Governor Forbes' far-seeing public works program, have made it possible to travel by motor through mountainous regions and lowland regions, too, where mountains are constantly appearing in the vistas. Too numerous are the natural wonders to enumerate. Among them is Mayone, the most perfectly shaped cone volcano in the world, some 8,000 feet high, and the mountain-side rice terraces of Northern Luzon, so gigantic an accomplishment of human toil as to make those of the Astec insignificant in comparison.



Masonic Temple Building, Manila, P. I.
G. Corner Fenhagen, Architect

To this tropical archipelago, abounding in natural wealth has come, during the regime of Governor General Francis Burton Harrison, a prosperity unprecedented, resulting in a great impetus to the institutions of civilization in general and in the inauguration of a great architectural program in particular.

Included in the population are the Moro people of the south, the head-hunting tribes of the north, and pigmy aborigines or negritos, scattered about the mountain sides in various localities. But the overwhelming bulk of the inhabitants is a Christianized people who have in their veins such a mixture of Spanish and Chinese blood as to make the thoroughbred Filipino almost a curiosity. It is for this somewhat passive people, so picturesque in their colorful and fantastic dress and so admirably endowed with the communal idea, that an American Colonial Architecture is being developed which, in time, if the Filipino demonstrates sufficient genius, will give place to a distinct Philippine Architecture.

There are relatively large and important cities: Manila, Cebu, and Iloilo are

examples. Corregidor, the portal of Manila Bay on the west, is guarded by mountain promontories flanking a narrow channel, and is transformed at evening into a veritable golden-gate, the full beauty of which daily attracts thousands of gaily costumed natives to the Luneta, Manila's twilight recreation park overlooking the great expanse of the bay, some thirty miles across, upon which, where in centuries gone by floated picturesque Spanish galleons, now ride the dark silhouettes of a hundred modern vessels against the golden hues of the sinking sun.

The antiquity of this great port, rich in Spanish traditions and aspects, can never be ignored for the walls of the great Intramuros, the best preserved example of medieval fortress architecture in the world, is predominently evident. Neither can the accomplishments of the last two decades be overlooked for Manila in many ways is as modern as it is antique. There are park systems, boulevards and improved street layouts, the result of Mr. Burnham's splendid scheme for civic development; also a large modern hotel, clubs, office buildings, a cathedral, several golf links and a polo ground.

Mr. William Parsons, consulting architect to the Government during the greater part of Governor Forbes' administration, evidently pursued a professional policy emphasizing the importance of city planning and landscape developments. His splendid work in perfecting Mr. Burnham's plan for the City of Manila, which, by the way, has been and is being substantially carried out, is probably the greatest accomplishment of his regime for which he will long be gratefully remembered.

Mr. G. Corner Fenhagen succeeded Mr. Parsons. He recognized the importance of city planning and continued the admirable work of his predecessor, but in addition inaugurated a building architecture of style and quality, and to him belongs credit for the architectural conception of the proposed Capitol group in Manila, the beauty of which is graphically evident in the accompanying bird's-eye perspective.

The increased revenue of the Government in recent years has made an accelerated and enlarged building program possible. During this period the policy of the Consulting Architect has been calculated to arouse a popular response to the cause of Architecture through the actual construction of a great many imposing Government edifices which, while in accord with conservative precedents, were also of a sufficiently popular character to excite general interest. Such a policy was furthermore designed to gain the confidence of the people and



Detail, Banking Screen, Philippine National Bank
Ralph Harrington Doane, Architect

their officials in recommendations with respect to the more intangible problems of the future, that must be considered years in advance of their actual realization, by producing a current government architecture impressive enough, and it may even be said ostentatious enough, to arouse widespread and general enthusiasm.

In the early days, the Americans enforced a bare, severe, undecorated architecture as an antidote for the prevalent garish tastes of the native people. Such a severe architecture as is only permissible in conjunction with the finest building materials was attempted in concrete, a material which though structurally excellent is artistically bastard, and in no way expresses the native luxuriance of the tropics or the prevalent ease of life in the far East. This architectural procedure met with local dissatisfaction on every hand. The Filipinos were willing to be shown a new architecture if it could be richly decorated, but were not willing that their public buildings should be devoid of any embellishment whatsoever, little more, in fact, than warehouses.

Concrete for the exterior of monumental building projects is admitted by the architectural profession to be the least desirable of all masonry materials. Its natural color is gray and lacking in vibrant quality capable of producing pleasureable color sensations. Furthermore, while the natural effect of time upon accepted building stones produces a weathering beneficial to their tone quality, the effect of weathering upon concrete is decidedly detrimental, and results in a more unsightly and depressing aspect than is presented by the newly constructed material.

Since the construction of genuine ashlar stone exteriors is impossible at the present time, a synthetic artificial stone has been devised comprising granulated particles of handsome local marbles mixed with cement in such proportions as to make the marble particles completely preponderant. The surface of this product, being tooled to expose the actual marble aggregate, produces a vibrant color tone, by virtue of the exposed particles of marble, and resembles in mass the appearance of white marble or cream warm lime stone, as may be desired, and responds to the gorgeous colorings of tropical sunlight.



Lobby, Provincial Capitol Building, Lingayan, P. I.
Ralph Harrington Doane, Architect

It is an acknowledged architectural precept that the softer the material the more it may be decorated. Ornament is produced in terra cotta with the utmost facility, hence, it is considered good taste that terra cotta buildings shall be highly decorated. The synthetic stone above described, for plain wall surfaces, is manufactured at various building sites, but the ornamental parts are manufactured in Manila (in accordance with the policy of producing all architectural and building specialties in Manila for shipment to the provinces) by a special corps of fifty or sixty sculpturers and

moulders working under the supervision of the Consulting Architect. Since the manufacture of this synthetic stone is found to be somewhat analogous to the manufacture of terra cotta, it is found possible to obtain without unreasonable expense an ornamentation of public buildings consistent with the standard of good taste exemplified in classic and renaissance architecture.

Government buildings have already been practically completed under this new policy. They represent a substantial beauty in accordance with best architectural traditions and precedents, as well as a practical solution of tropical climatic conditions. They have inspired the pride and interest of the communities in which they are located and seem to demonstrate that the Filipino people are willing to forego the shoddy gaudiness of Spanish standards for the more substantial and satisfying results of legitimate architecture.

The Philippine Islands are on the threshold of an architectural era of great importance in their history. Never before has there been so prevalent a desire for monumental public buildings. The coffers of the government treasury are well filled and prosperity is evident on every hand. Entirely aside from a very considerable amount of standard schoolhouse and market construction the Consulting Architect's office last June was engaged on the following bonafide projects either actually under way or for which appropriations had definitely been made, a conservative cost estimate of which is ten million pesos or five million dollars gold, which, when completed, will add substantially to the general tone of architectural development in the Islands.



Postego Building, Manila, P. I.
G. Corner Fenhagen, Architect

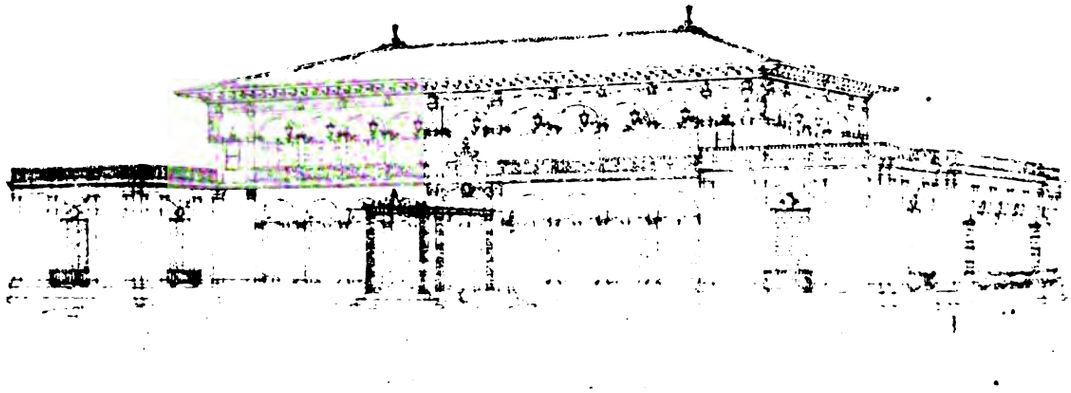


Dining Room, Malacanang Palace, the Residence of the Governor-General



Small Municipal Building designed for Spanish type of construction
Ralph Harrington Doane, Architect

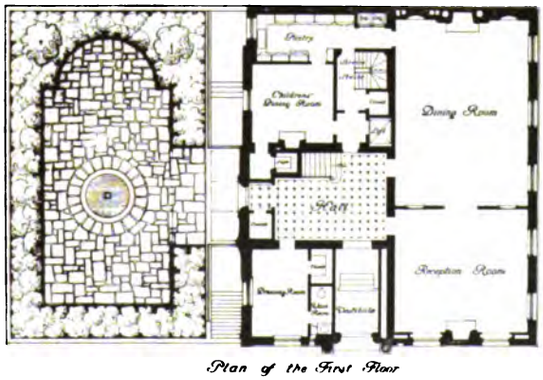
1. The Insular Government Building, Manila.
2. The Jones Bridge, Manila.
3. Post Office, Manila.
4. Malacanang Executive Building, Manila.
5. Alterations of the Malacanang Palace, Manila.
6. General Hospital Dormitory, Manila.
7. High School, Manila.
8. Insane and Contagious Disease Wards, San Lasaro, Manila.
9. Trade School, Manila.
10. Pier Head Houses and Water Front Construction, Manila.
11. Provincial Capitol, Pangasinan.
12. Provincial Capitol, Leyte.
13. Provincial Capitol, Ilocos Norte.
14. Contagious Disease Hospital, Zamboanga, Mindanao.
15. Normal School, Zamboanga, Mindanao.
16. Presidencia, Barawan, Leyte.



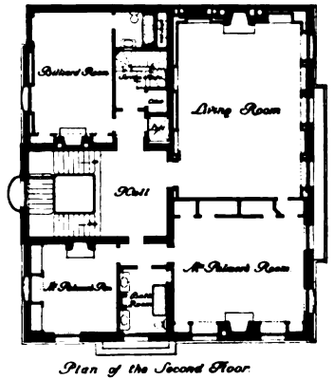
Executive Building for the Governor-General, Manila, P. I.
Ralph Harrington Doane, Architect



GENERAL VIEW OF EXTERIOR



Plan of the First Floor



Plan of the Second Floor

FLOOR PLANS

RESIDENCE FOR FRANCIS F. PALMER, ESQ., 1180 PARK AVENUE, NEW YORK

DELANO & ALDRICH, ARCHITECTS



COURT ENTRANCE

RESIDENCE FOR FRANCIS F. PALMER, ESQ., 1180 PARK AVENUE, NEW YORK

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LIVING ROOM



DINING ROOM

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STAIR HALL



LIBRARY FIREPLACE

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DETAIL OF LIVING-ROOM DOORWAY



DETAIL OF DINING-ROOM DOORWAY

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GENERAL VIEW OF EXTERIOR

RESIDENCE FOR JOHN S. ROGERS, ESQ., 53 EAST 79TH STREET, NEW YORK

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ENTRANCE HALL, STAIRWAY



STAIRWAY LANDING, MAIN FLOOR

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ENTRANCE HALL

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DRAWING ROOM

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RECEPTION ROOM

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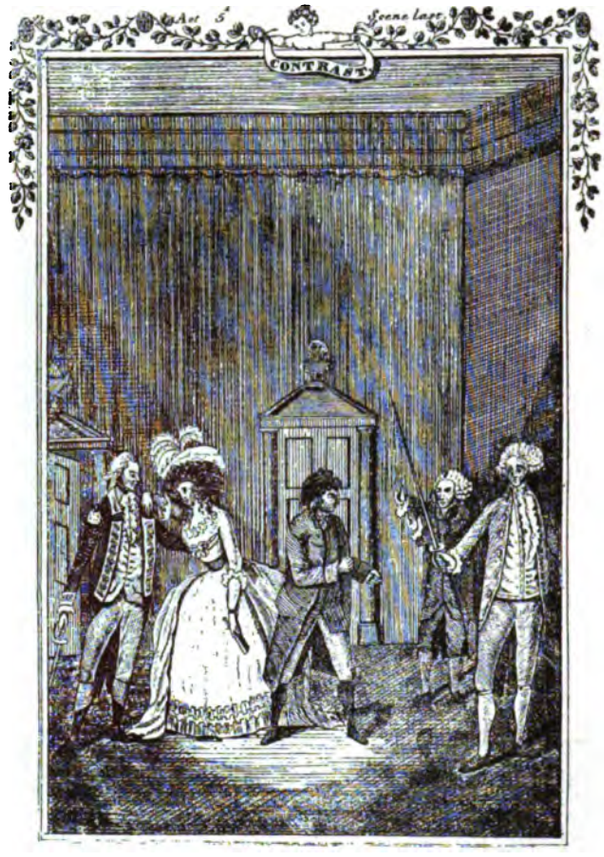
LIBRARY

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The Haymarket Theatre



Setting for one of the first American plays, "The Contrast" scene in the Old John Street Theatre



Frontispiece to "The Fool's Opera," played in New York City in 1731

men used to amuse themselves with amateur performances." The first actor who ever played in America was Anthony Aston and he did so before the year 1731, in New York City and elsewhere on this continent, in "The Fool's Opera," or "The Taste of the Age," written by Mat. Medley and performed by his company.

The modern theatrical stage setting gives the artist the opportunity to show his genius and all the talent and imagination he possesses. Real interiors are built and no detail is considered trivial. If the plot calls for an eighteenth century interior with brass door knobs, a real brass door knob is used, the room is also furnished with beautiful lighting fixtures, furniture, pictures and hangings, and no thought or expense is spared in coordinating the drama and its setting. In fact, it is the stage pictures of today which express the spirit and life of the people that interest and fascinate the imagination of the public that enjoy the theatre.



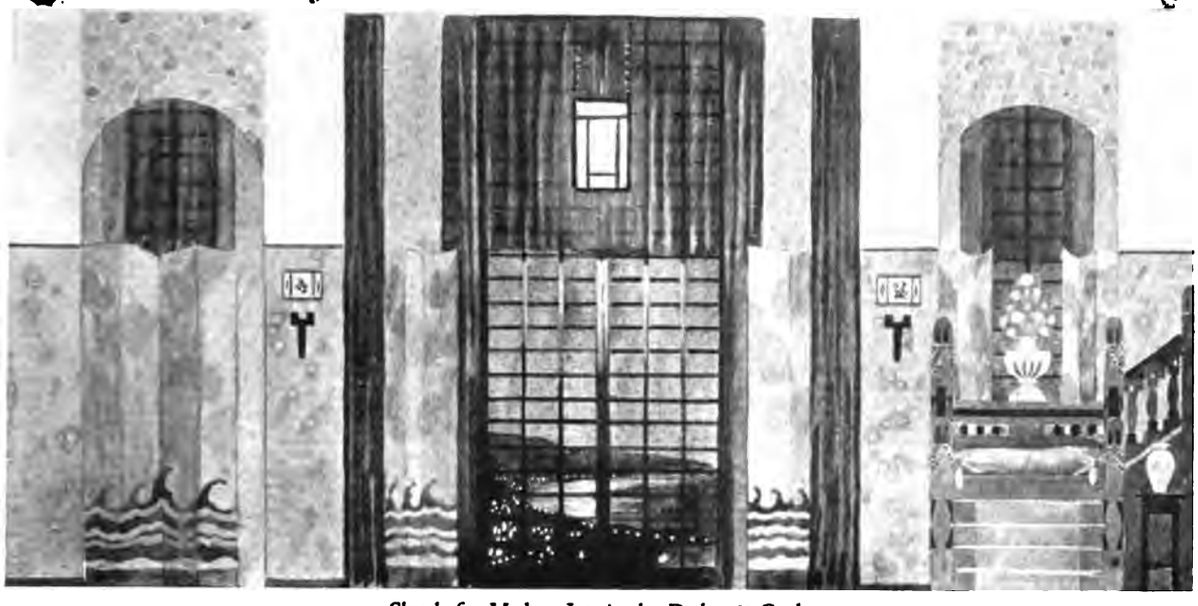
Modern English Stage-Setting, "Twelfth Night" at the Savoy



A Modern French Setting by M. Dresa, "Les Concerts de Danse"



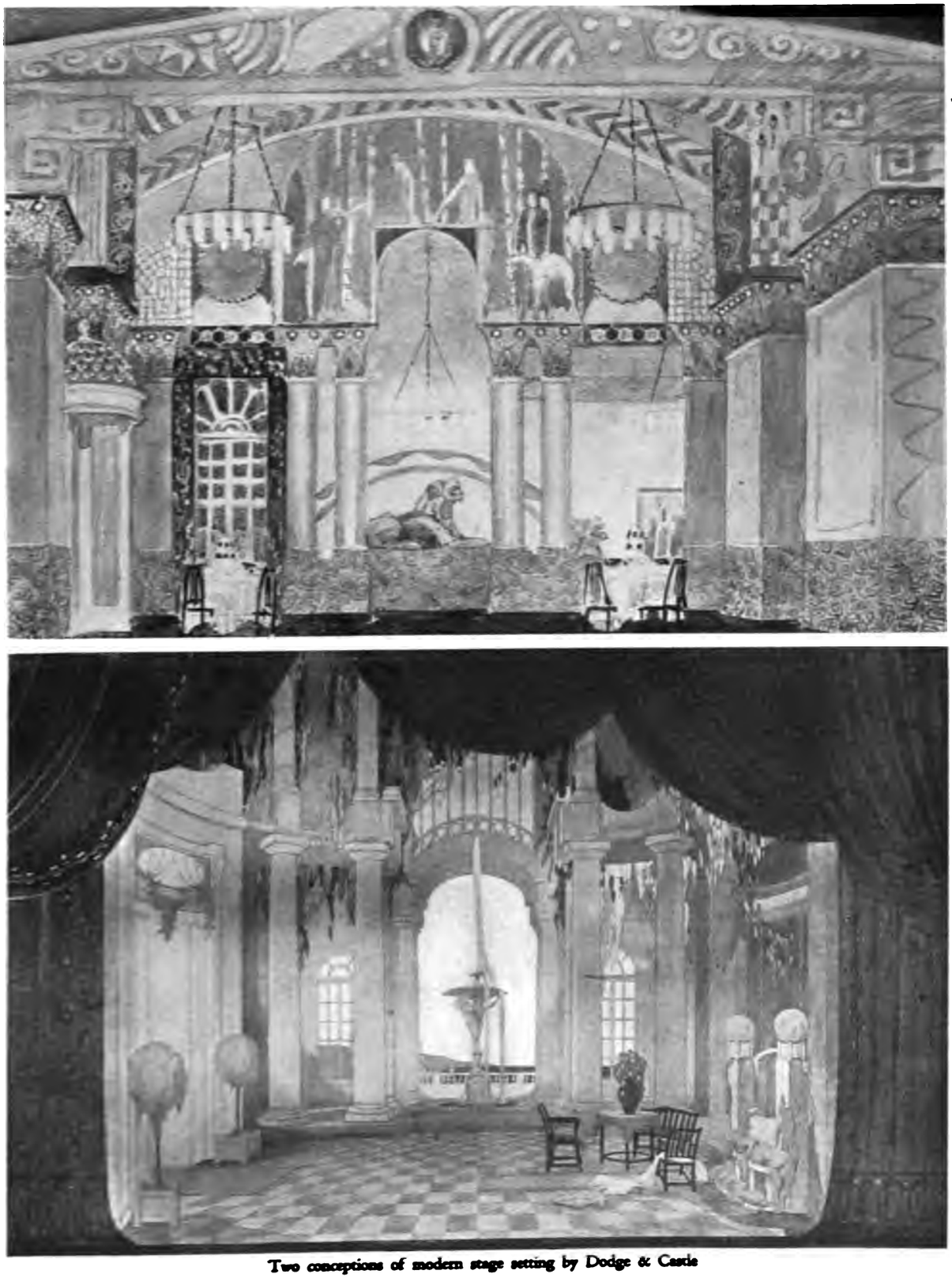
In the play, "Le Menage De Moliere," the stage picture has the panelling and details of a beautiful eighteenth century room



Sketch for Modern Interior by Dodge & Castle



A Modern French Setting by M. Bertia for the play, "A Good Little Devil"



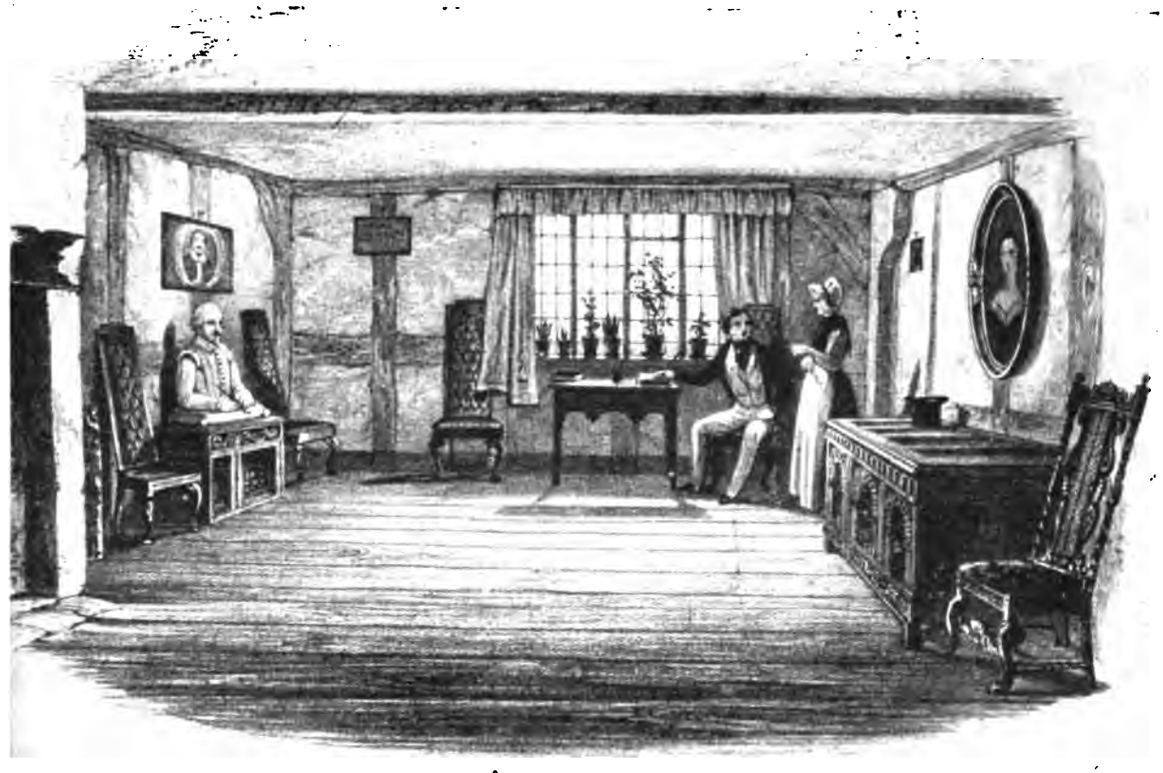
Two conceptions of modern stage setting by Dodge & Castle

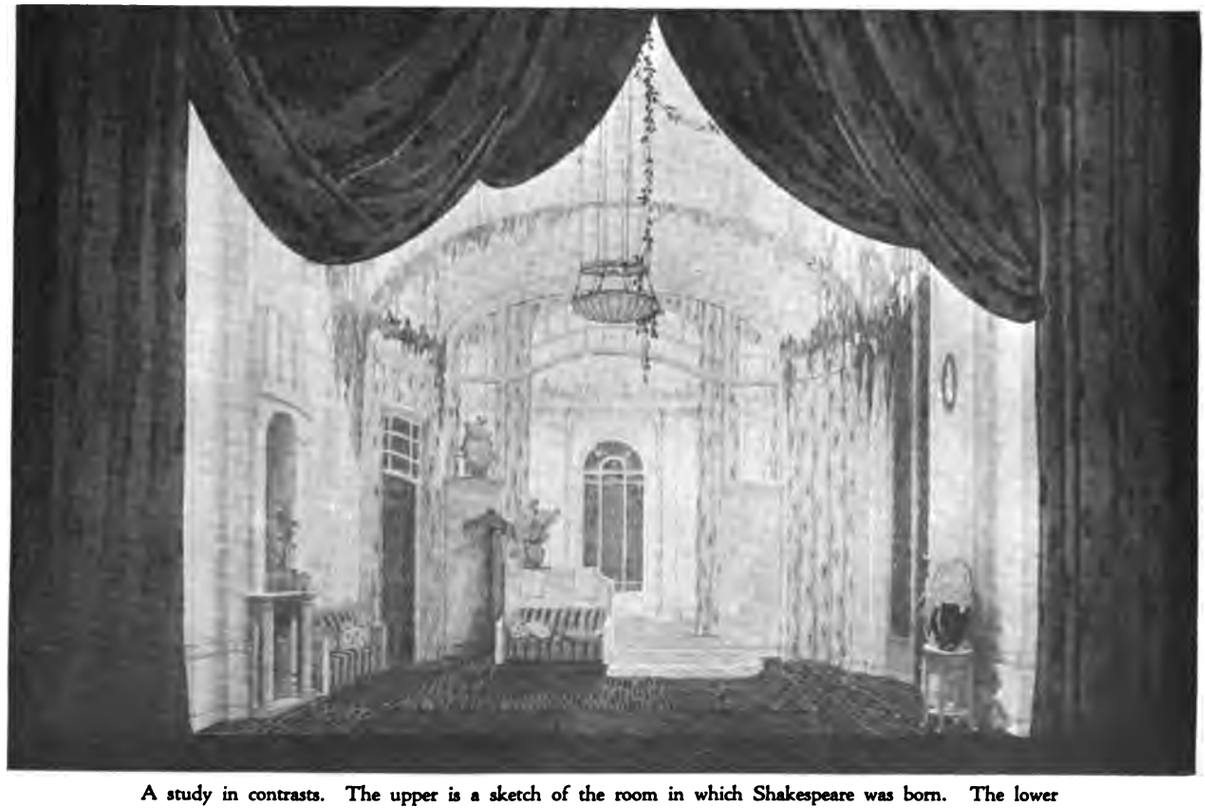


Sketch for play at the Opera-Comique by M. A. Bailly



Cardboard model by Dodge & Castle for John Barrymore





A study in contrasts. The upper is a sketch of the room in which Shakespeare was born. The lower is a study for a modern stage interior by Dodge & Castle

THE TOWN OF PERRY POINT, MD.

A DEVELOPMENT BY THE U. S. ORDNANCE DEPARTMENT

MANN & MAC NEILLE, ARCHITECTS

AS the Washington-New York Express roars out upon the long bridge spanning the Susquehanna River in Maryland, the attention of the passenger is drawn to a town of new houses on the opposite bank of the broad stream, thrown into bold relief by a green background of oak trees. In the early part of the last summer the oak forest still stretched to the water's edge; and in the short time which has elapsed since then there has arisen the new town of Perry Point, built as town planners and housing idealists have dreamed for years, completely forevisioned in all its aspects as the land was being cleared and made ready for building. The description of this new community, located apart from old Perryville and characteristically American in its design and ideals, would not be complete without a brief history of the reason for its existence.

Immediately upon the declaration of war, the United States Government, in its contemplated development of war industries, following the example of Great Britain, decided to assist in the stabilization of labor by providing proper housing for workmen at points where production efficiency and the holding down of labor turnover were imperative.

In the Army Ordnance Department great war contracts were to be let and vast industrial plants were to be financed. Naturally the question of labor became one of prime importance and an industrial service section of the Ordnance Department was created, having a housing branch as one of its important activities. The work of developing this housing branch to supervise various housing activities connected with ordnance contracts was entrusted to Perry R. MacNeille of New York city. When the great new plant of the Atlas Powder Company at Perryville was authorized it was realized that the scarcity of homes for workmen in this district would necessitate the provision of industrial housing as part of the plant. Mr. MacNeille was called upon to report on this phase of the development, and Mann & MacNeille, architects, were asked to lay out the new town and to design the various types of buildings necessary for the maintenance of community life.

The site selected, on the bank of the Susquehanna, is a generally level plateau averaging fifteen feet above the river. It is bounded on the north by a heavy growth of trees, effectually screening the town from the factory. Its advantages were actual proximity to the plant with effective separation from it and protection from the noise and smoke; good elevation above high water level; natural surface drainage; good water supply, and accessibility by railroad and turnpike to the main town of Perryville. Its topography and natural scenic features render it a picturesque and eminently fitted location for a home development.

The general street layout has its main avenues



The Club House



View from Power House Looking Toward Susquehanna River

running parallel to the river in order that the cross streets may open up vistas and act as air channels direct to the water. The property is naturally divided into two sections by a wooded ravine which offers a natural site for a central parking place. Here is located the school, with wide terraces and an outlook over the park to the river. Adding to the picturesque beauty of this spot is the old Manse, a home of ante-bellum days which has been remodelled and is now used by the general manager of the Atlas plant. The entire river front, as well as property adjoining the main entrance to the town, has been reserved and laid out in parks for public use. In the park at the main entrance a recreation ground is planned.

The westerly section of the property, lying between the railroad and the central park, is the first half of the development, now completely built, and contains in all 187 homes for married men. In boarding houses, located on the northerly side of the property and adjacent to the plant and restaurant, the single men are comfortably housed and quarters are provided in each building for caretakers and their families. In this section of the development there are two natural convergences of streets, one on the northerly side, known as the Plaza, the other at the park on the river. Around the Plaza are grouped the stores, motion picture theatres and church, forming a community centre. The fire house is advantageously placed near this point. Overlooking the park and river is the community clubhouse. The section of the development east of the central park contains approximately 200 houses on which construction has been started. In this section two additional churches are to be built. In the location and design of homes due attention has been paid to the æsthetic as well as the physical welfare of those who are to occupy them. Every house fronts on a wide, tree shaded street and building plots are at least 50x100 feet, giving ample space for lawns and gardens, with a desirable separation of at least sixteen feet between houses. Electric light, gas, sewer, water and other modern sanitary and utility features have been installed.

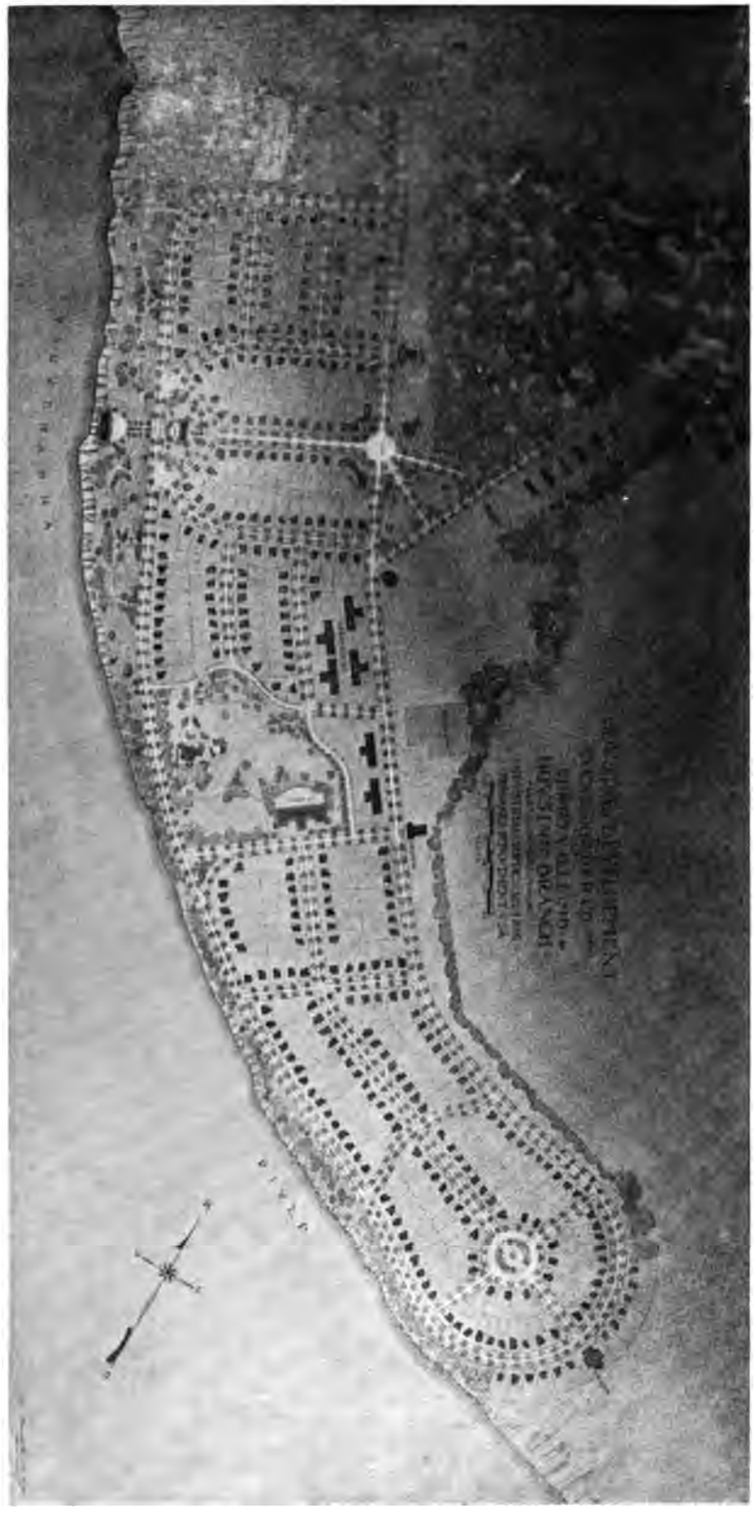
The houses are of different types and sizes and offer a scale of rents apportioned to the salaries of the various plant employees who will occupy them. Each house has a cellar, is furnished with hot air



General View from the River Front

heat, has a complete bathroom and kitchen equipment and is lighted by electricity. The construction is of frame, with shingled roofs and exterior walls, and each house has a front and kitchen porch and outside entrance to the cellar.

In the designing of the new village of Perry Point the rapidly enlarging sphere of the woman in community life has not been overlooked, nor has there been a lack of attention to the practical needs and wishes of the housewife. All community activities have been arranged for the enjoyment and use of both sexes. In all houses the arrangement and placing of the kitchen has been carefully studied in order to conserve energy. There is no waste space. In all instances the kitchens are flooded with light and air. In most cases the kitchen is a corner room and the outlook from the windows is pleasant.



Town Plan

Mann & Mac Neille, Architects

The smallest houses contain four rooms and are designed for the workers who wish, or need, to economize in rent. The chief feature of these houses is the elimination of the ordinary dining room and its combination with the kitchen. Here a large airy room, approximately 10x16 feet is provided. Sidewall benches flank two sides of the table, while on the opposite side of the room the stove and sink make up the culinary equipment. If desired, a screen may be used as partial separation. Windows on three sides of the room provide ample light and ventilation. This departure is exemplary, in that the dining room constitutes almost waste space in many homes where practical everyday living calls for conservation and a lightening of housewifely burdens. In these houses



Type D-6—Seven-Room House



Type D-7—Seven-Room House

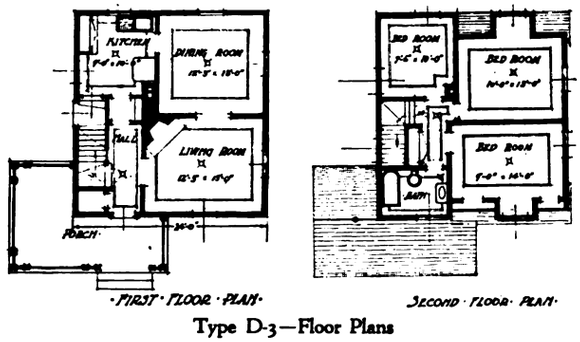
a good sized living room takes up the balance of first floor space, while two spacious bedrooms and a bathroom are located on the second floor.

The five-room house was not given particular consideration in this operation for the reason that it is impractical to construct a small house of this type. Either four or six rooms are the more economical and in greater demand. The six-room houses have kitchen, dining room and living room on the first floor, with three bedrooms and a bath upstairs. One type has an open fireplace in the living room.

In the seven-room houses the interior planning is similar, but the exteriors are varied by the simple expedient of providing an entrance with a small wide porch in some cases and a front entrance and a large porch extending entirely across the front of the house in others. The designs are consistently Colonial throughout and the costs, at the present time, vary from $3,000 for the four-room house to $5,000 for the houses of seven rooms.



Type D-3—Six-Room House



Type D-3—Floor Plans

The dormitories for single men offer an interesting study of planning to fit living conditions. Forty-six bedrooms are provided in each building, with ample toilet and lavatory facilities, including showers. On the first floor is located a kitchen and large central room which may be used as a dining room if desired, to serve meals in the house. Otherwise it makes an attractive



Living-Room, Type D-3—Six-Room House



Dining-Room Entrance, Type D-3—Six-Room House



Type D-9—Seven-Room House



Type D-4—Seven-Room House

lounge and is used for this purpose at Perry Point, where six of these buildings have been planned.

The school building is a one-story and basement structure and of practical design for a town of this size. On the main floor there are four classrooms opening on a wide corridor. Flanking the entrance hall are two rooms, one used as a teachers' room and the other as a library or study. In the basement are playrooms, one each for girls and boys, a manual training room and domestic science room.

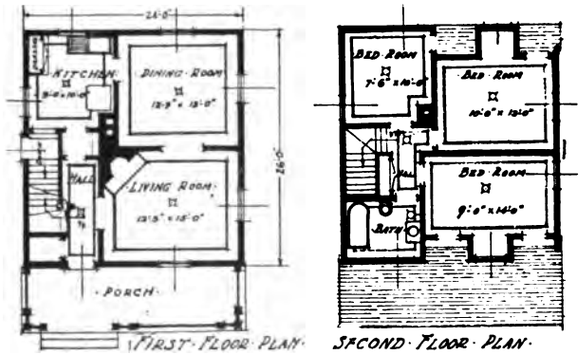


Type D-3—Seven-Room House

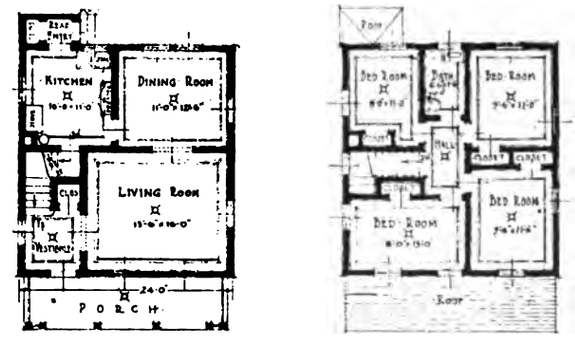
The community clubhouse is a building of unusual interest. The first noticeable feature upon approaching this building is the ample porch space. Here there are porches on both first and second floor having an outlook across the river. The main entrance is on the opposite side of the building leading into a vestibule and hall, off which are the billiard room, ladies' room and hall. The lounge is spacious, measuring 20x43 feet approximately, with a large open fireplace. From this room French windows open upon the first large porch. A periodical and reading room is provided, while the small kitchen is for use when refreshments are to be served.

The upper floor is given over entirely to a large auditorium with a stage and various service rooms, including a dressing room and a serving room for use when banquets or collations of any kind are in order. Two large balconies add to the attractiveness of this floor. The building will be used as a general club for all residents and as a community meeting place.

The buildings are all painted white, with green blinds and lattice and gray shingled roofs, with white chimneys. By a careful study of groupings, by conserving the heights of cornices and roof ridges, and by careful planning to obtain unity of mass in large buildings and groups, the completed development will be harmonious and distinctive.



Floor Plans, Type D-4—Six-Room House



Floor Plans, Type D-5—Seven-Room House



The School House

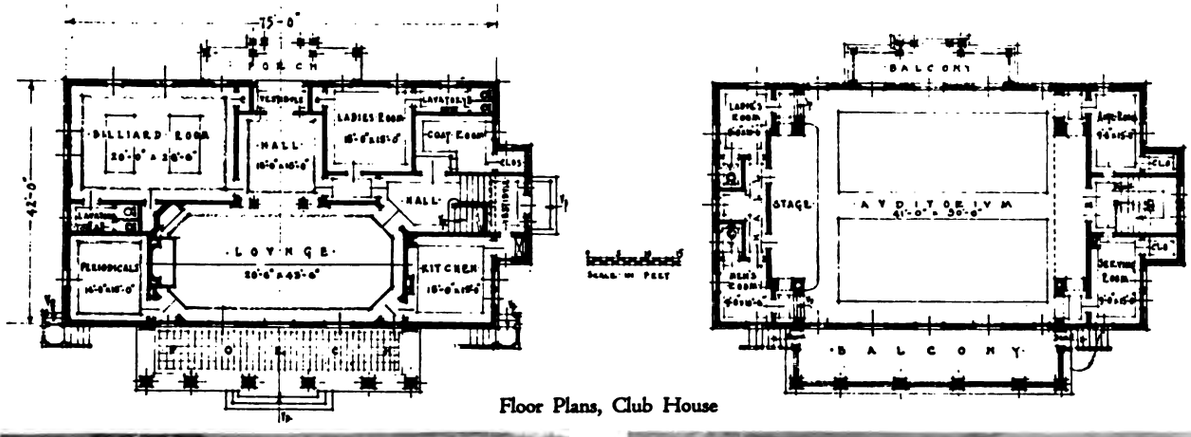


The Theatre

The Perry Point operation stands out among a score or more of interesting and successful housing developments in America because the architects have avoided fantastic and picturesque types of design, which although novel and appealing at first sight do not prove permanently satisfying nor economical in construction and maintenance. It is a sign of progress in the crystallization of ideas in housing in America, that this, one of the latest of the developments, has been carried through on lines which if followed are certain to insure better results that will greatly strengthen the movement for better housing of industrial workers.



East Elevation of Club House



Floor Plans, Club House



Interior of Club House



Kindergarten in School House

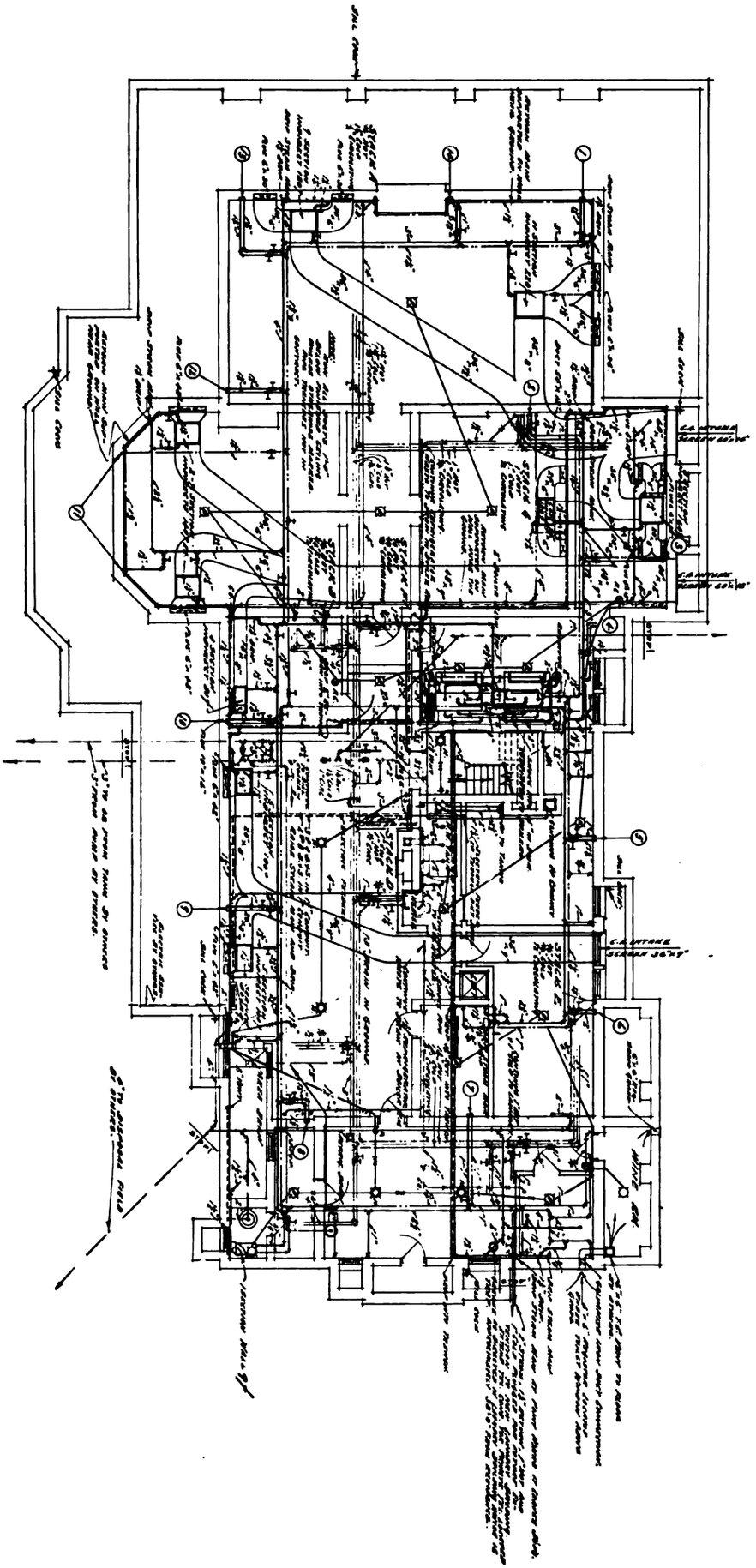
EDITORIAL COMMENT ON ARCHITECTURE & THE TIMES

COMPLETION of twenty-four housing developments, in nearly a hundred planned or contemplated by the United States Housing Corporation, is practically assured by the recent action of the House of Representatives Committee on Buildings and Grounds, in substituting for the Senate resolution (stopping all work not 75 per cent. completed) a bill that orders the prosecution of work in designated districts, including the projects in Washington. The same resolution proposes, also, that the Secretary of Labor shall make to Congress "such recommendations and suggestions as he may deem practicable to meet the demands for homes for the citizens of the United States." This action, coupled with the work already accomplished by the housing bureau of the Emergency Fleet Corporation and the Ordnance Bureau of the War Department should give encouragement to every one interested in the furtherance of the movement for the improvement of housing conditions in America.

The action of Congress above referred to, was brought about by the energetic endeavors of hundreds of individuals and many organizations who protested to the Committee of the House of Representatives. One of the committees that appeared before the Congressional Committee was composed of individuals appointed at an informal conference held in Philadelphia on January 3rd, to discuss the creation of a permanent federal agency to deal, in whole or in part, with industrial housing, town planning, community planning, municipal affairs, etc. This conference was attended by many prominent in civic work, and was called by Lawson Purdy, J. Horace McFarland, Frederick Law Olmsted, Robert W. de Forest and Samuel Gompers. It was the sense of the majority of those present that some kind of a Federal agency should be established, to deal with housing and community planning, in the broad sense of dealing with the entire physical environment of the inhabitants. The proposed federal agency, it was urged, should be limited to the function of research, experimentation, and dissemination of information, acting as a central agency for the service of state authorities and local committees. It was also the sense of the majority of those present that federal action should be taken toward creating a comprehensive and systematic mechanism to facilitate the financing of housing. According to the instructions of the conference, a joint committee is being appointed, made up of committees of one from each of a number of national organizations, to draft the bill authorizing and directing the formation of the Federal agency advocated.

It is to be hoped that the Government will get back of this movement, both for the appointment of the Federal agency and for lending its credit for home building. The need is great and the opportunities are large. Perhaps no single aspect of our national life has more distressing characteristics than the manner in which the greater part of our wage-earning population lives. The congestion of the people in our larger cities, coupled with the drab, unsanitary and indecent accommodations typical of struggling settlements in our smaller cities, or about the fringes of the big centers, is one of the severest criticisms that can be rightfully made against democracy in this country, and something that calls for correction, either by adjustments in our economic existence as a people, or by education, demonstration or practical aid by federal, state and municipal agencies.

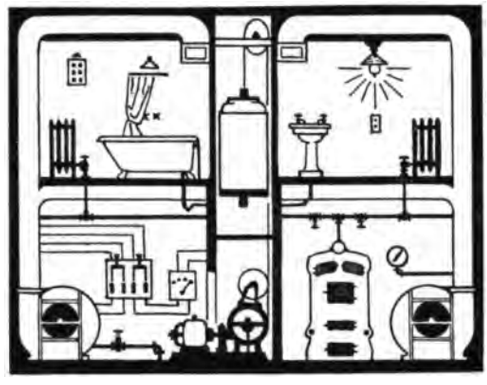
When our intelligent population realizes that the wage-earner in a comfortable home with attractive surroundings is the last to give ear to the wiles of the labor agitator or the one of Bolshevist tendencies, the support of public opinion which is needed to give the movement effect will be forthcoming. A people who, like ourselves, can raise twenty billions of dollars for the defense of an ideal, can, and will, if they are properly informed, get back of this ideal—a proper home for every industrious citizen—an ideal that comes close to the lives of the great majority. A good home for the wage-earner need cost only two or three thousand dollars. When we consider that thousands, even millions of large calibre shells for the great guns on the western front cost not less than a thousand dollars each to prepare and place on the battle line, it does not seem unreasonable to ask our people to get behind a movement that will provide good homes, each of which will last for fifty to a hundred years, that cost not a great deal more than a pair of destructive shells. This is something that was never made more real or vital than by the war, and is one of the problems which we can, in the reconstruction period, hasten to a successful solution.



Basement Plan

EQUIPMENT

DEPARTMENT EDITED BY J. F. MUSSELMAN



IT is with the realization that it is necessary, in making an architectural publication complete, to deal with all subjects in which the profession is really concerned, that this department of THE ARCHITECTURAL REVIEW has been organized. In no respect is the building of today so utterly different from the building of a century or a decade ago as it is different in equipment, and this constantly changing branch of building construction has developed new problems at such a rate that it has created a separate profession, under the architect's direction, which deals with mechanical, electrical and sanitary equipment only. We crave the architect's indulgence for the diversion of his attention from his own branch of the work but ask for free discussion of other things that are also vital.

We concede that, to the average architect, the technical details of equipment are uninteresting and that they have a bad reputation of occupying space needed for other things and of causing interferences and being unsightly however they are handled. But on the proper design of the equipment and the correct consideration of it at the proper time, the success of a building depends in almost as great a degree as on sufficient study of its plan.

The necessity of the closest possible co-operation between the designer of a building and the designer of its equipment is too obvious to warrant discussion, but the two open questions as to their relations are: first, at what stage of the work should the design of the equipment begin, and second, what questions the designer of the equipment should help decide.

In any project where the nature of the equipment is such as to require that it be designed ultimately by an engineer who makes a specialty of this kind of work, there is nothing to be gained on any hand by delaying the start of this portion of the design, for the responsibilities of the success of the undertaking are to be mutual and, whatever the nature of the engineer's problems may be, they will be simplified by proper consideration in the earliest possible stages of the work with full knowledge of the requirements.

It is not uncommon for the equipment design to start so far behind the building drawings that the changes necessarv to meet the physical requirements of the equipment installation work hardships on all and cause delays that are hard to account for. In these late beginnings there is a tendency for the engineer to comprise and to lay out something not quite so good that adapts itself more easily to the scheme as it stands.

The extent to which the layout of the building equipment affects the architectural arrangements can be expressed most readily by a statement of the points in each branch of the work which the equipment designer should help to decide.

Nothing affects the plan of a modern city building or its future success more than the elevator

arrangements, and before a study of the elevator arrangements is made a satisfactory plan cannot be started. This study of the elevator problem should consider the character of occupancy, the ratio of the elevator platforms area to the floor area to be served, the frequency of elevator departures required from the ground floor, the proper division of express and passenger traffic, the amount of freight to be handled, and the rentable area lost by extending the local shafts to the top of the building. After these points are settled the details, such as type and location of machines, overhead reactions, signals, etc., can follow.

In connection with the heating work the designer of the equipment must decide before the architectural plans are too far advanced, the area and height required for the plant, its location relative to the coal pile and the chimney, the size of the chimney, the character of the system, the space required to conceal the risers and the floor fill necessary for the radiator connections.

The plumbing problems which must be attacked early have to deal partly with arrangements to facilitate economical installation and partly with the permanent maintenance of the equipment. Under the first head comes the determination of the number of fixtures required per floor, the arrangements of fixtures relative to the stacks and provisions for space required for the plumbing pipes. The useful life of a building or the time that will elapse before the repair changes become excessive and begin to cut down the net income, depends almost as much on the plumbing installation as on any one part of the whole, and it is not uncommon to see an old building that would be usable for many additional years except for the prohibitive cost of renewing an obsolete plumbing system. To reduce this unfortunate future possibility to the minimum it is necessary that the designer of the equipment consider such questions as the comparative lives of pipes under different conditions and of different materials, and the facility of renewing such pipes and parts as are apt to require renewal.

If no electric generating plant is required in the building the electric equipment problems which require early consideration are few and consist principally of the establishment of the centers of electric distribution and the spaces required for feeder conduits. Such questions as the locations of outlets, character of fixtures and kinds of materials to be used can be delayed until all other drawings are well advanced.

In connection with the equipment comes next the question as to how the plans are to be prepared. There is a considerable sentiment of late in favor of showing the equipment on the construction drawings. It is possible to do this to advantage only when the construction drawings are made at quarter scale and when the building plans are simple; even then additional drawings are necessary to cover the riser diagrams and such special details as are of interest to only one or two trades.

In order to make a clear layout of the equipment of a building that is in any way complicated, without necessitating a specification too voluminous in descriptive matter, it is necessary to devote one complete set of floor plans and diagrams to equipment alone, but on these may be shown clearly all necessary arrangements in connection with the mechanical, sanitary and electric trades. Grouping all of these trades on one set of drawings tends to make such drawings complicated and hard to read but it is generally conceded that the advantages gained in the avoidance of interferences justify the complication and the additional drawing room labor involved.

The cut of a basement plan of a residence, showing the layout of the heating, electric and plumbing work, is given to show how complicated such a drawing becomes where all of the equipment is covered by a single set of drawings. On the original drawing the matter is somewhat simplified by using different colored inks but the impossibility of making the prints in colors tends to make the field print which is reproduced from the multi-colored original more difficult to read rather than otherwise. But the most obvious point that is brought to the attention by such a complication of lines as that shown by the cut is the extreme difficulty of avoiding interferences that are almost inevitable where each trade has a drawing all its own.

In a building which is to have an electric generating plant or an extensive refrigerating plant, as is usually required in a modern hotel, the proposition is practically reduced to the construction of a building around a plant, however much the architect may object; for it is not enough to set aside an arbitrary space, however ample, for the plant. The plant foundations must be fitted in between and around the column footings or the column footings must be arranged to accommodate the foundations of the plant. This latter is not always as nearly impossible as it would seem, and it is here that the structural engineer shines and does his bit toward making the equipment designer less unpopular. It must be borne, too, that an improperly located or badly arranged plant increases maintenance cost and adds to the ever increasing difficulty of holding a satisfactory operating force, without which the building cannot be run.



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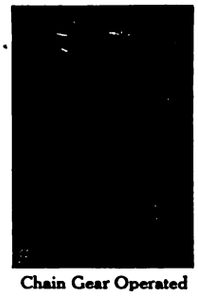
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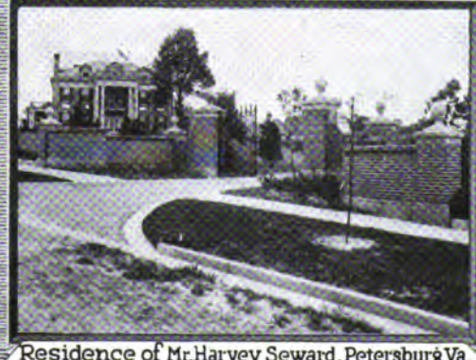
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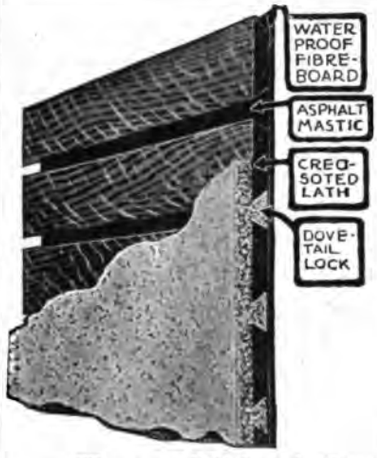
THE

ARCHITECTURAL REVIEW



March 1919

THE
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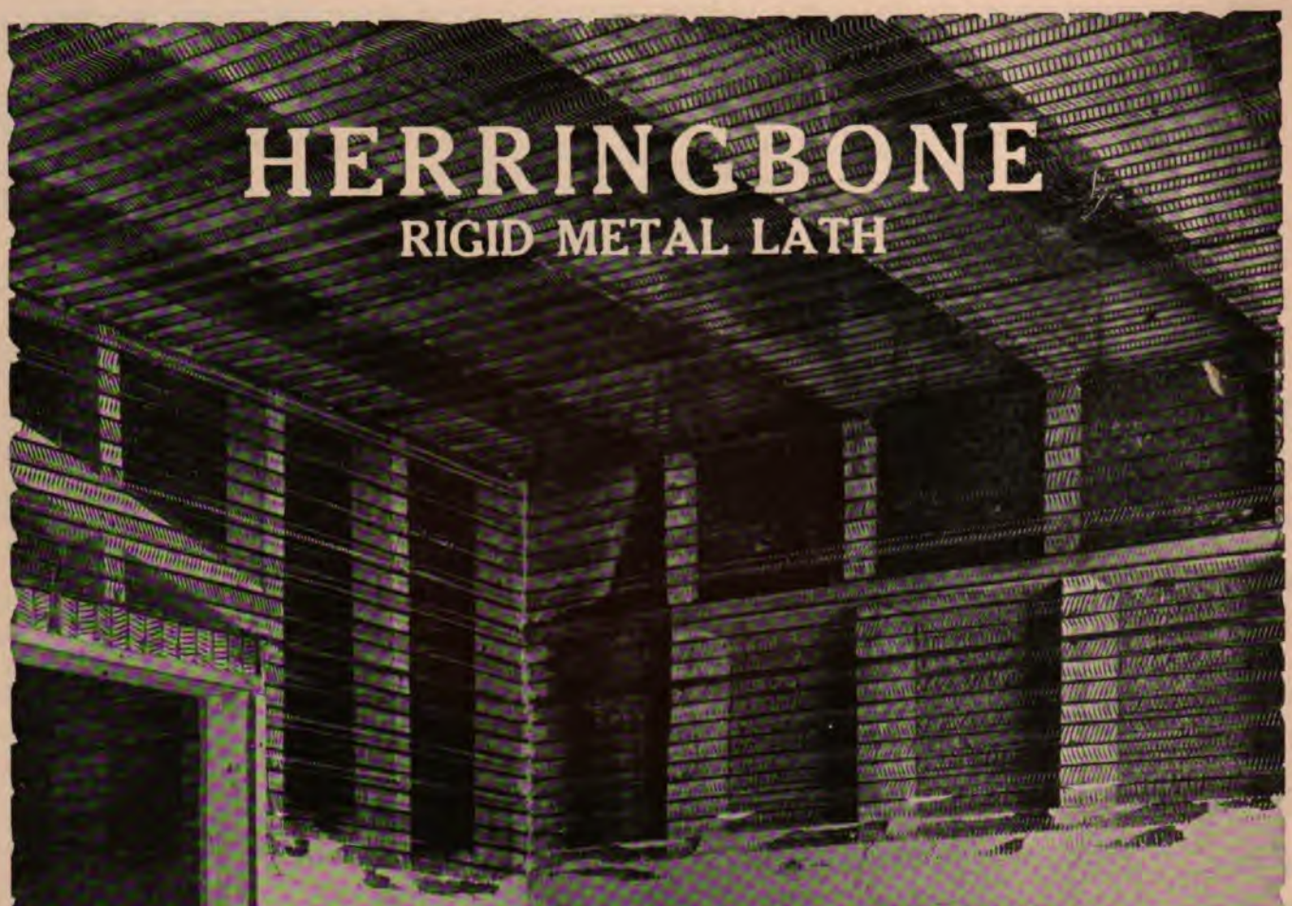
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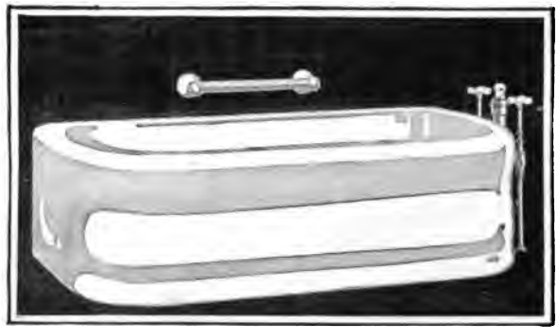
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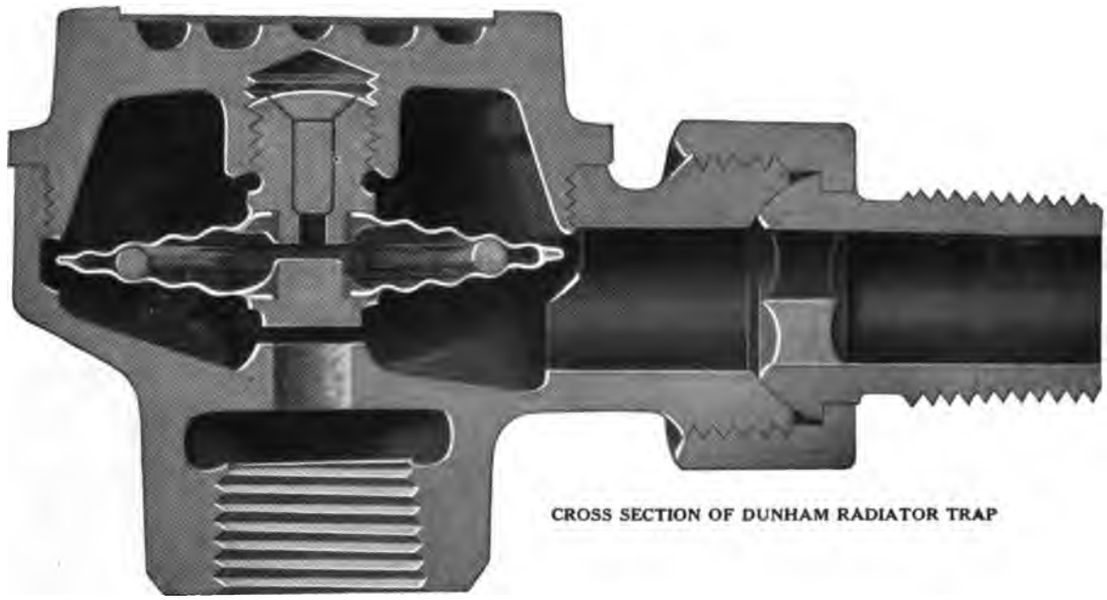
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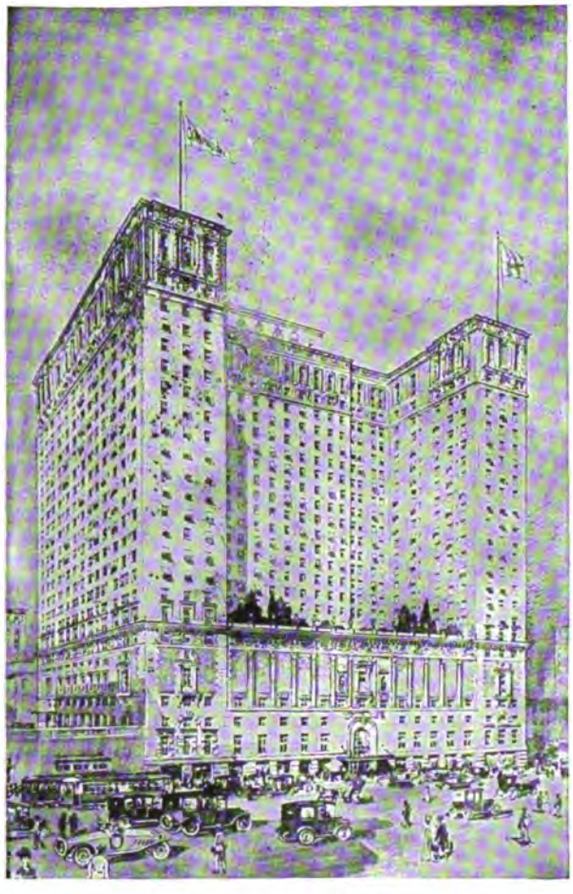
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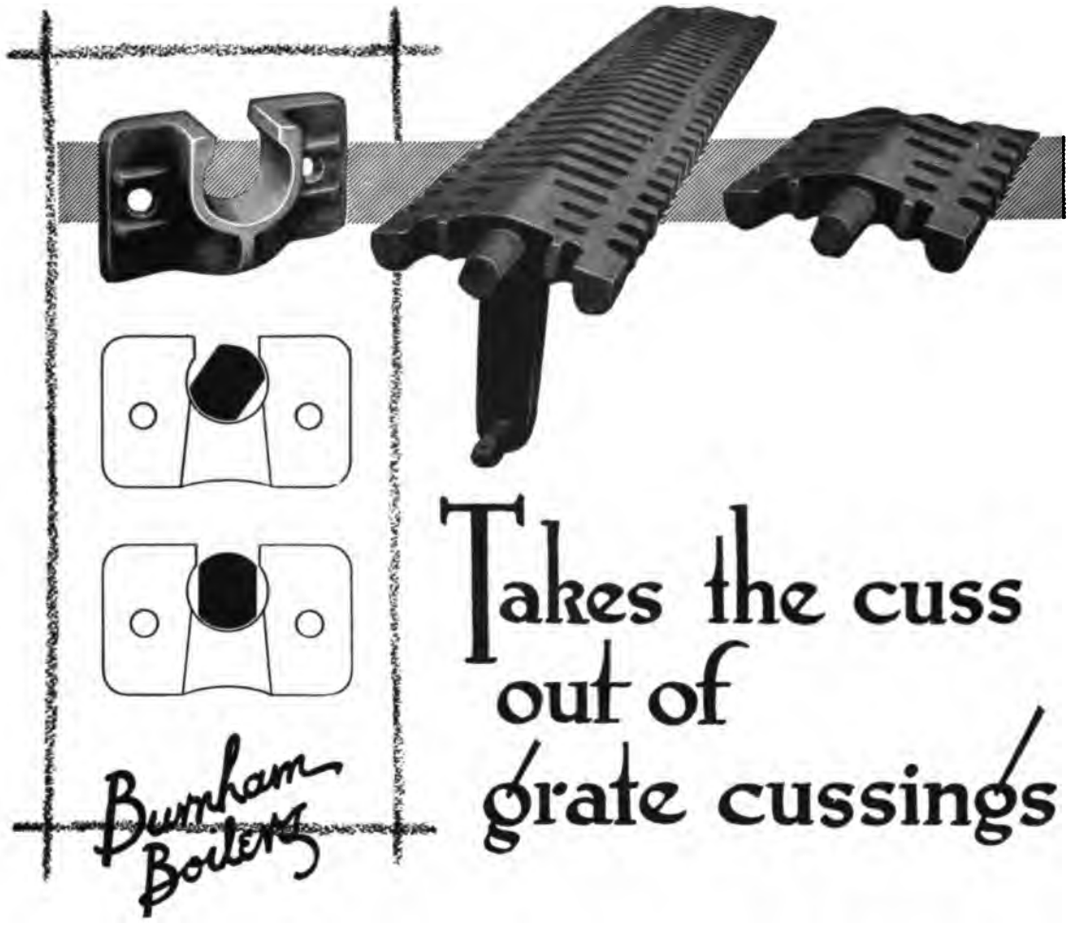
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VOL. VIII, No. 3 March, 1919

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THE hotel industry, as it is termed by leading hotel operators in this country, represents one of the largest investments of capital among the major building industries and it has reached such a high level that there is hardly a business that does not profit by the development of modern hotel enterprises.

From the wayside tavern and the old fashioned hostelry characteristic of the towns, villages and cities of the nineteenth century, the hotel has become an institution that, in scale, in the complication of its mechanical operation, the costliness of its construction and appointments, and in the comforts and conveniences which it provides, surpasses even the dreams of those who were active in this field of business a generation ago.

The improvement of hotels along these lines has grown out of the advances in all of the mechanical arts, coupled with a higher standard of living on the part of the public and an increase in the architectural skill applied to these buildings. Steel frame construction, the development of scientific heating and ventilation, the perfection of vertical transportation, all have worked together to produce a type of building which in complexity outrivals any similar form of building construction today.

The building of hotels has progressed not only along the lines of perfection in the mechanical arts, but has advanced with equal rapidity in the provision of those comforts which make traveling a pleasure and living in strange places more agreeable than it has been at any time in history.

To meet the ever-increasing demands which have been made upon him, the hotel designer has developed from an artisan, which he was in the old days, into an artist as well as an architect. He is now responsible for the introduction and proper assembling in the building of all those forms of the art of interior decoration which since the earliest times have contributed to make the habitations of man more livable and that have become more and more the subjects of careful study involving color, texture, form and proportion in their application to the special requirements of interior design.

Of this many sided development the Hotel Pennsylvania and the Hotel Commodore are remarkable examples embodying in their construction and decoration the latest practical ideas and the artistic motifs inherited from past centuries and here applied to buildings of modern construction in a way that shows the versatility of our architects at its best.

These hotels afford a striking contrast in the main elements of their design and construction. On the one hand we have, in the Hotel Pennsylvania, the work of architects who have established traditions in those forms of the building art that have come down to us from classic times and from the Renaissance. On the other hand we have, in the Hotel Commodore, the work of a firm who have become known largely through their specializing in the hotel designing field and who have in this building turned away from the accepted ideas of decoration and furnishing for hotels and have produced interiors that because of their unique character give to this hotel a peculiar attractiveness.

In this number we present both of these buildings.

IN THE APRIL ISSUE

THE next issue of The Architectural Review will contain a variety of interesting matter, beginning with a description of an advanced idea in institutional work and its architectural development, illustrated with photographic views and accompanied by a plan.

Residences of widely different types by prominent architects will be illustrated and described.

Every new effort on the part of a skilled architect to meet in a satisfactory way the difficult conditions imposed by the average urban building site is interesting and helpful. A city house that is of more than usual interest is shown in this issue.

Houses that are representative of the latest developments in country house design are also presented.

Continuing his series of articles, Mr. Phillips will treat in a sympathetic manner another phase of the interior architecture of past centuries, illustrating his subject with examples distinguished for the appeal they make as well as for excellence of design.

A large mountain resort hotel that is picturesque as to exterior and unusually elaborate in its interior treatment and appointments will be described and shown by views and plans.



GATEWAY TO MANHATTAN ISLAND OPPOSITE THE HOTEL PENNSYLVANIA
THE PENNSYLVANIA RAILROAD TERMINAL, NEW YORK
McKIM, MEAD & WHITE, ARCHITECTS

The
ARCHITECTURAL REVIEW
Volume VIII
Old Series Vol. XXV
MARCH 1919
Number 3

THE WORLD'S NEWEST AND LARGEST HOTELS

THE HOTEL PENNSYLVANIA AND THE HOTEL COMMODORE

SO frequently are we told with respect to specific engineering or architectural works in America, and particularly with reference to things done in New York, that they are the largest of their kind in the world, that some have grown skeptical, or at least callous, toward dimensional appraisals of this sort. Yet, whatever may be our reaction in this respect, it may be said, quite truthfully, of the Hotel Pennsylvania and the Hotel Commodore that they transcend in scale any similar effort that has been made in this field anywhere in the world, the former surpassing the latter in respect to the number of guest rooms by two hundred only. Whether or not the reader is moved by the significance of the thought, the buildings which stand at the two great railway gates to the metropolis of the western hemisphere, the Pennsylvania Railroad Terminal and the Grand Central Terminal respectively, will be so appraised, quite justly, by the thousands who daily come and go through the portals to the city. Great hostelries, such as these, perform their function and are measured in greatness not only by what one sees, but by the manner in which they contribute to the comfort and pleasure of the guest who has traveled long and far, and who is in search of rest and enjoyment within their walls.



The Hotel Commodore, New York
Warren & Wetmore, Architects

These hotels are not only of large size but are designed to administer amply to physical needs. They also enjoy locations that are surcharged with impressiveness, the two great railroad stations in themselves affording striking illustrations of things done in a big way and giving abundant evidence of the facility with which our American life adapts itself to developing things nobly and on a large scale.

In addition to embodying the latest ideas in hotel design and construction, these hotels contain the solution of a number of interesting problems arising from conditions peculiar to the sites upon which the buildings are erected. The interiors are also of interest.

THE HOTEL PENNSYLVANIA, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS

THE Hotel Pennsylvania has been built for the Pennsylvania Terminal Real Estate Company, a subsidiary of the Pennsylvania Railroad Company, and is leased and operated by the Hotels Statler Company, Inc., who participated in the solution of the many problems which the development of the plans brought forth.

The building is the work of a firm that has established traditions in our American architectural development by designing wisely and well in many branches of building construction in this country. McKim, Mead and White were also responsible for the Pennsylvania Railroad Station, which faces the hotel on the opposite side of Seventh Avenue, and is in itself one of the landmarks of architectural progress in America.

In designing the hotel for the same owners, the architects have studied to relate the two structures in scale and expression. Attention is called to the setting-back from the regular city building lines of both the station and the hotel to produce the effect of a plaza.

The site of the hotel occupies the block front, 200 feet long, between 32nd and 33d Streets, on the east side of Seventh Avenue, and extending eastward 400 feet from Seventh Avenue to the property line of Gimbel Brothers' department store which occupies the remainder of the block to Sixth Avenue.

The plan has the proportions of a double square, and all its details and circumstances are developments from the solution of the typical bedroom floor illustrated on page 57. After a period of study, the scheme of wings with courts open to the south was adopted. The wings are 54 feet wide and the courts 40 feet wide, excepting the easterly court next to the Gimbel Brothers' store which is 50 feet wide. A glance at a typical bedroom floor plan shows one long corridor running east and west with connecting corridors to the wings, running north and south. The width of the wings, 54 feet, was adopted after careful study to give a room depth of approximately 15 feet with a six-foot passage way and bathroom between the bedroom and the corridor hall.

The Seventh Avenue wing was set aside for especially attractive rooms designed to give the highest class of accommodations. These rooms overlook the Pennsylvania Station. They are large, a bay of framing being devoted to each bedroom, while in the other wings there are in general two rooms to a bay of framing.



The Hotel Pennsylvania, New York
McKim, Mead & White, Architects

The northerly portion of the building, overlooking 33d Street, was planned after the scheme of passenger elevator service had been determined. The passenger elevator hall, on the axis of the second wing, is near the Seventh Avenue front and convenient to the higher priced rooms. In working out the details of the bedroom floors, the principles already evolved by Mr. E. M. Statler for his chain of hotels with a definite type of service in view were the controlling features.

The sub-basement floor plan, see page 62, takes in the space which was partly pre-empted by the Pennsylvania Railroad and Long Island Railroad tunnels, which find their way into 32nd and 33d Streets at this level. There is an underground passage to the

Pennsylvania Station at this level, reached from the hotel by a pair of elevators running to the main lobby, three floors above. The western half of the sub-basement is occupied by the laundries and the eastern half by machinery of various kinds, ice-making machines, compressors, tanks, etc. Power is supplied from the Pennsylvania Station power houses in 31st Street, and exhaust steam from the same source is used in the heating system. This plan is similar to that adopted in connection with the Commodore and Biltmore hotels adjacent to the Grand Central Terminal. As we reach the roof of the tunnels, there is a level called the sub-basement mezzanine, see page 62, through which the upper part of the laundry extends. This level is devoted to store-rooms, lockers and the cafeteria for employees.

On the basement floor, see page 62, which is next above and is the first floor below the street level, are entrances from the Interborough Subway platforms. A passage under the 33d Street sidewalk, connecting these platforms with those of the Hudson and the Manhattan Railway Station at Sixth Avenue and 33d Street, is proposed for development in the near future. The entire easterly half of the basement floor is devoted to the main kitchen. The westerly half is given over to a large grill room with an area of over 7,000 square feet, a general wash-room, a barber shop and a lunch room, these latter occupying the extreme westerly end and opening onto the subway platforms.

The first floor, at the street level, is largely the solution of a problem in circulation—the accommodation and control of the arriving and departing guests and the throngs of more casual diners, dancers and others. The main entrance in the center of the Seventh Avenue facade, leads into the main lobby, which is approximately 70 feet by 133 feet, including space which is partly overhung by a mezzanine gallery supported by a colonnade surrounding the entire lobby.

In designing the lobby, the architects made an effort to produce an imposing effect, a tremendous vestibule for a hotel of extraordinary proportions. The result is that one is immediately impressed with the feeling of great spaciousness properly related in scale to the great terminal across the street. There is no crowding or confusion among the throngs that pass through and the entire problem of circulation on the first or main floor, as the plan on page 58 shows, has been studied very carefully with a view to avoiding *cul de sacs* in any direction. Note the complete circulation around the palm room.

On opposite sides of the main lobby, the hall containing the passenger elevators and the main office face each other. Just south of the main en-



Typical Floor Plan

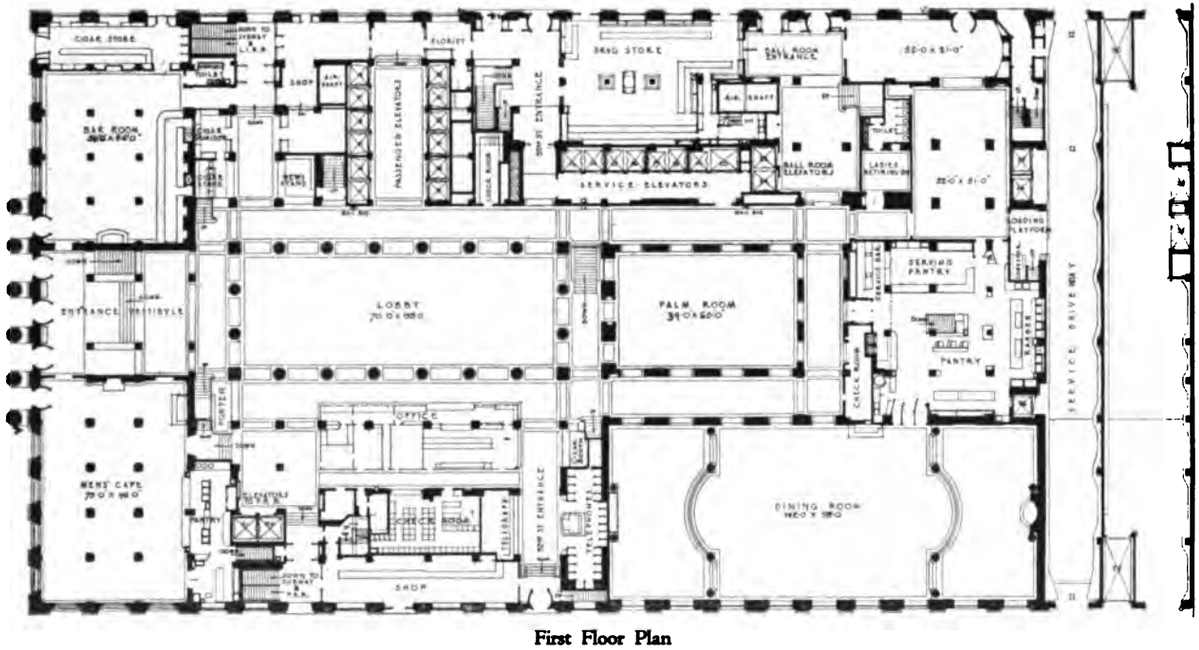
trance is the landing of the private elevators from the Pennsylvania Terminal which bring the arriving guests directly to the main office. On either side of the entrance from Seventh Avenue are the bar at the north and the café at the south. The latter is a quick-service dining-room with open grill.

In the center of the building, on 32nd and 33d Streets, are entrances connected by a broad corridor running north and south, approximately bisecting the main floor, at the easterly end of the main lobby. Farther to the east on 33d Street is a ballroom entrance with its own stairway and elevators.



Lobby from the Seventh Avenue Entrance

The main dining room, on the 32nd Street side, south of the tea room, opens onto the south arm of the promenade which, as mentioned above, is an extension of the lobby circulatory scheme. The dining room measures 58 feet by 142 feet and the ceiling is 22 feet in height. It is one of the largest rooms of its kind anywhere. It is divided into a large central area and a terrace at each end which is raised 18 inches above the floor level of the central portion. The terraces were designed to break up the monotony of so large a floor space and to afford those guests who choose or are



First Floor Plan

obliged to occupy tables at the ends of the room a view of the entire scene of activities in the main portion of the room.

A feature of interest in the study of the first floor plan is the arrangement at the extreme easterly end of the building, where the site of the hotel abuts on the property occupied by the department store. To eliminate the objectionable sights and sounds incident to the shipping and receiving business of the store and hotel, which would otherwise be conducted largely across the sidewalk and in the roadway of 32nd and 33d Streets, the owners of the hotel have voluntarily cut off 50 feet at the rear of their site, next to the department store building, which has been converted into two driveways, one for the use of the hotel and the other as a loading and shipping drive for Gimbel Brothers. Mention should be made of the mezzanine floor over the main office which is used for the manager's headquarters, bookkeeping department, etc.



Detail of Main Lobby Colonnade

The first mezzanine floor plan, illustrated on page 62, shows a gallery entirely around the upper part of the lobby, serving as a promenade and lounge. Opening from the gallery on the south side is the writing room and library, and on the Seventh Avenue front is a large area which has been set aside as a place for the exhibition of special merchandise for which temporary display space may be required by manufacturers or agents. The easterly half of the first mezzanine floor is taken up with the upper part of palm room and main dining room, printing shop, carpentry shop, and offices and maids' dining rooms. From the hotel driveway mentioned above, a conveyor takes the trunks up to the receiving room on this floor, and thence to the service elevators without change of direction.

From the first mezzanine gallery, a rise of eight feet takes us to the main ballroom floor, the plan of which is reproduced on page 60. The ballroom floor is an entertaining floor a little over 200 feet square, absolutely complete with its service rooms, toilets, checking facilities, banquet kitchens, and rooms for all sizes and kind of parties, and with instant and easy access to the street and also to the main body of the hotel. The ballroom is easy of access from the main passenger elevator group and the mezzanine gallery of the lobby. It also has its special stairway and elevator with an entrance directly from 33d Street on the north side of the building.

To reach the ballroom from either of these approaches one passes through a grand foyer on either side of which are parlors which can be used as additional reception rooms or checking space. Following the policy adopted by the leasee no permanent check-room facilities are provided, but instead removable and temporary furniture for the purpose, to be used when necessity arises in rooms

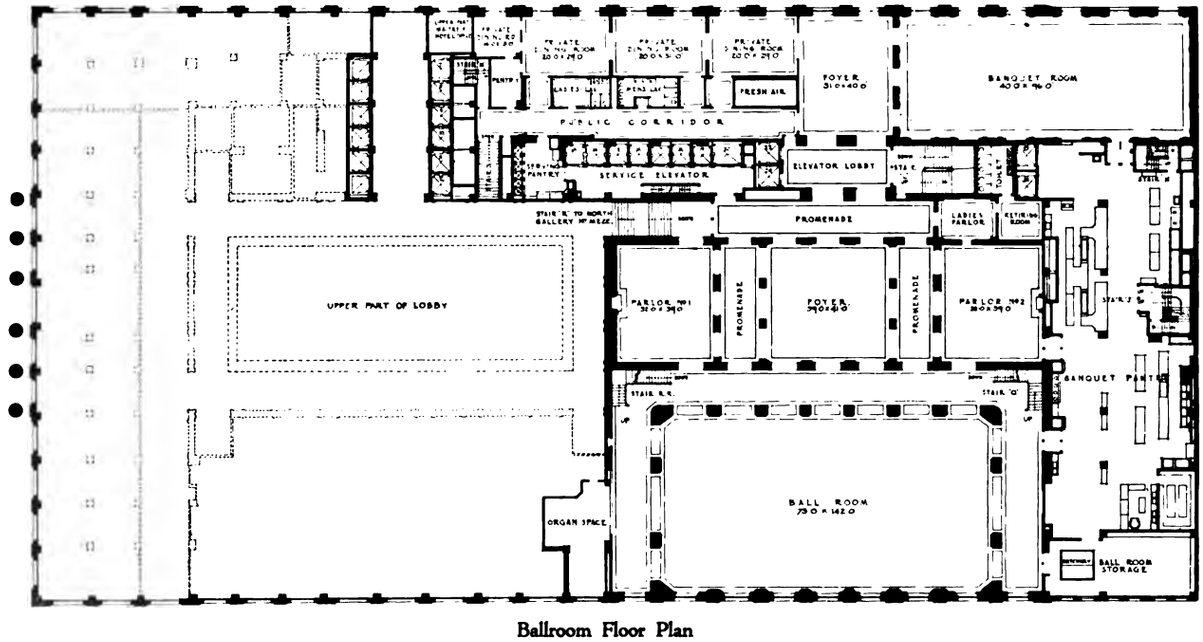
otherwise available for entertainment. The ballroom runs the entire length of the main dining room directly below and is about 12 feet wider with a gallery of boxes around three sides. Its dimensions, 75 feet by 152 feet and 30 feet high, make it one of the largest rooms of its kind.

To the north of the ballroom entrance lobby are private dining rooms and a smaller banquet room with a foyer, and at the east end, over the driveway, the banquet kitchen. Two floors are taken up for the housing of the employees in the upper part of the lobby and ballroom floor before the level of bedroom courts is reached.



Corridor of Main Lobby

Summarizing the outline of the building given above: the main lobby with its framing above takes up almost three and one-half average floors in height; the main dining room, and a tea room, one and one-half stories; and the ballroom about two and one-half stories. The solid part of the building, up to the level of the typical bedroom floor, consists of first or main floor, first mezzanine, ballroom floor, second mezzanine and second floor, of which the second mezzanine and second floor are simply the portions left of the rooms with great ceiling heights, and are devoted to the housing of employees.



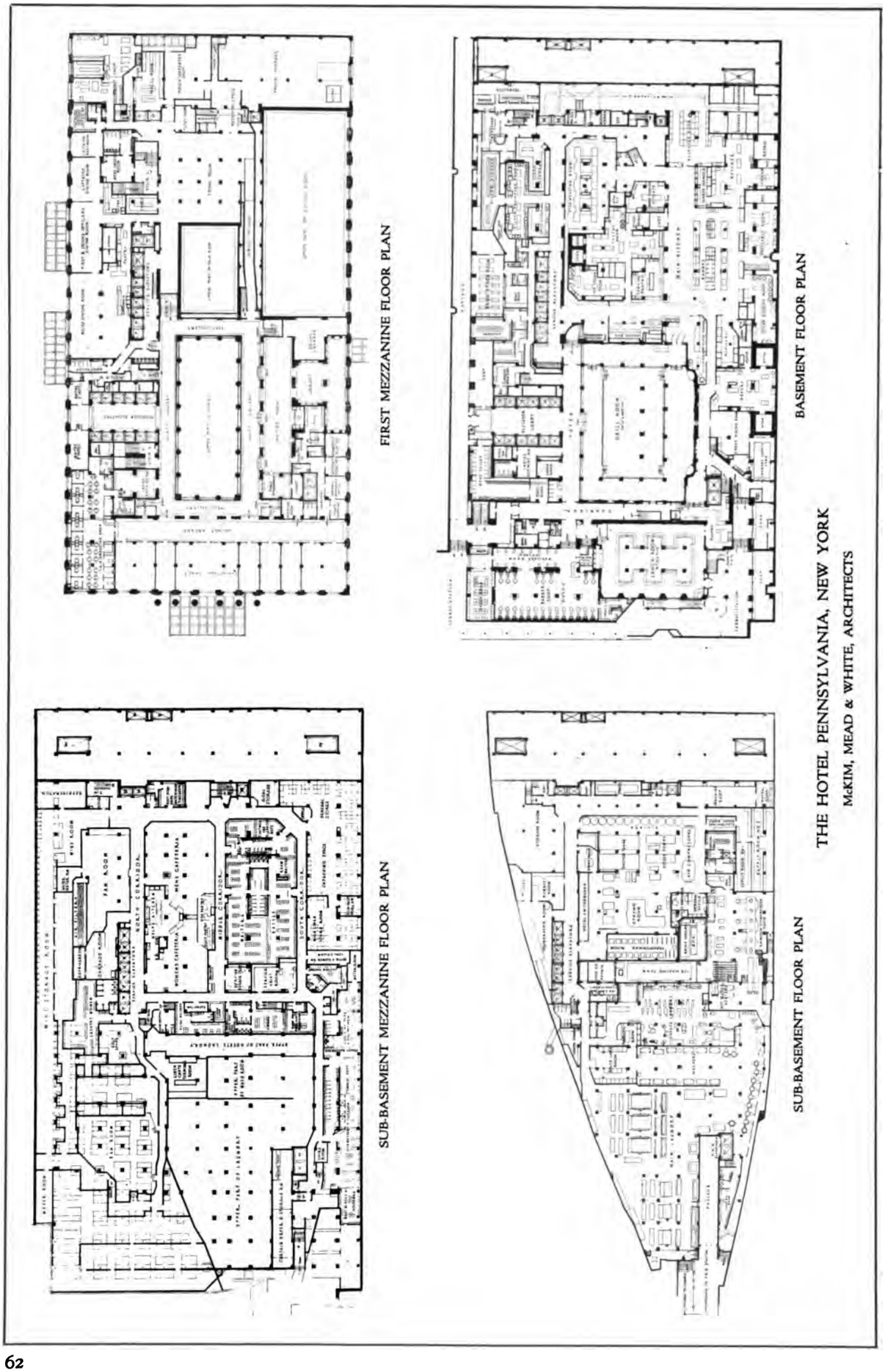
Ballroom Floor Plan



West Wall, Main Dining Room



East Wall, Main Dining Room
The Hotel Pennsylvania, New York
McKim, Mead & White, Architects



FIRST MEZZANINE FLOOR PLAN

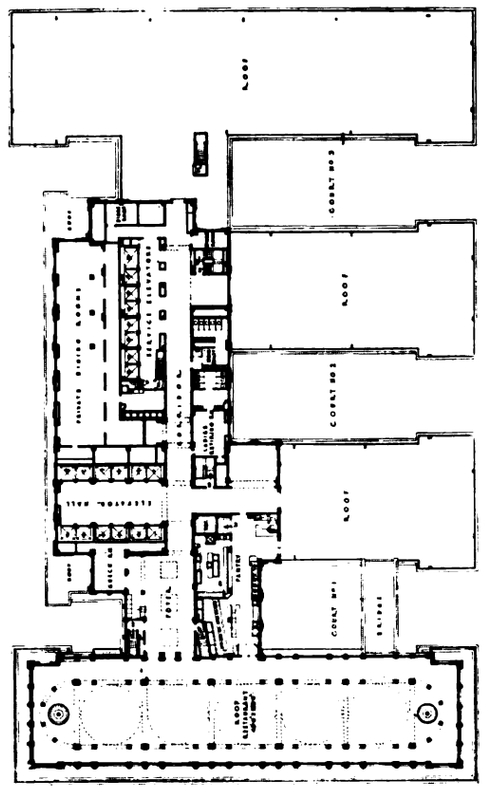
BASEMENT FLOOR PLAN

SUB-BASEMENT MEZZANINE FLOOR PLAN

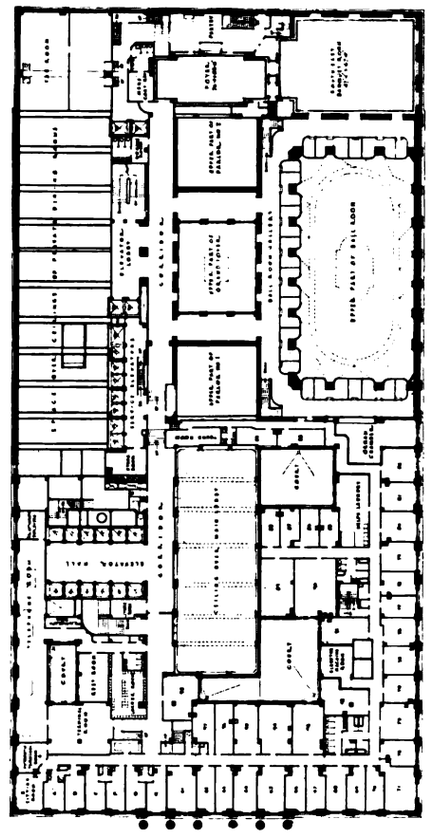
SUB-BASEMENT FLOOR PLAN

THE HOTEL PENNSYLVANIA, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS



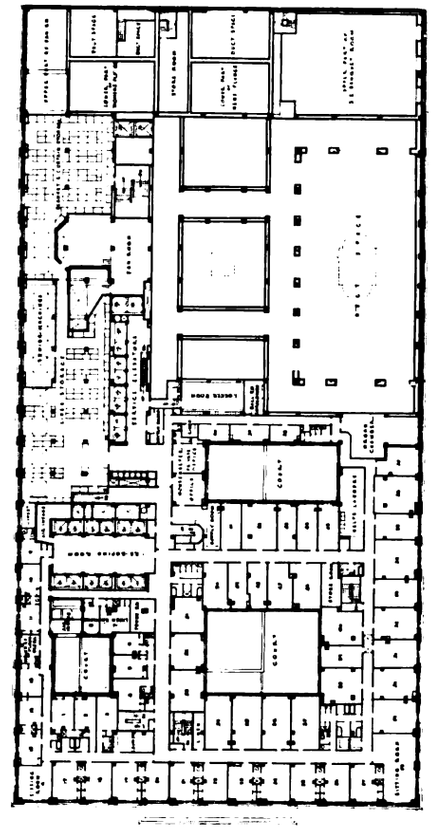
MAIN ROOF PLAN



SECOND MEZZANINE FLOOR PLAN



THIRD FLOOR PLAN



SECOND FLOOR PLAN

THE HOTEL PENNSYLVANIA, NEW YORK

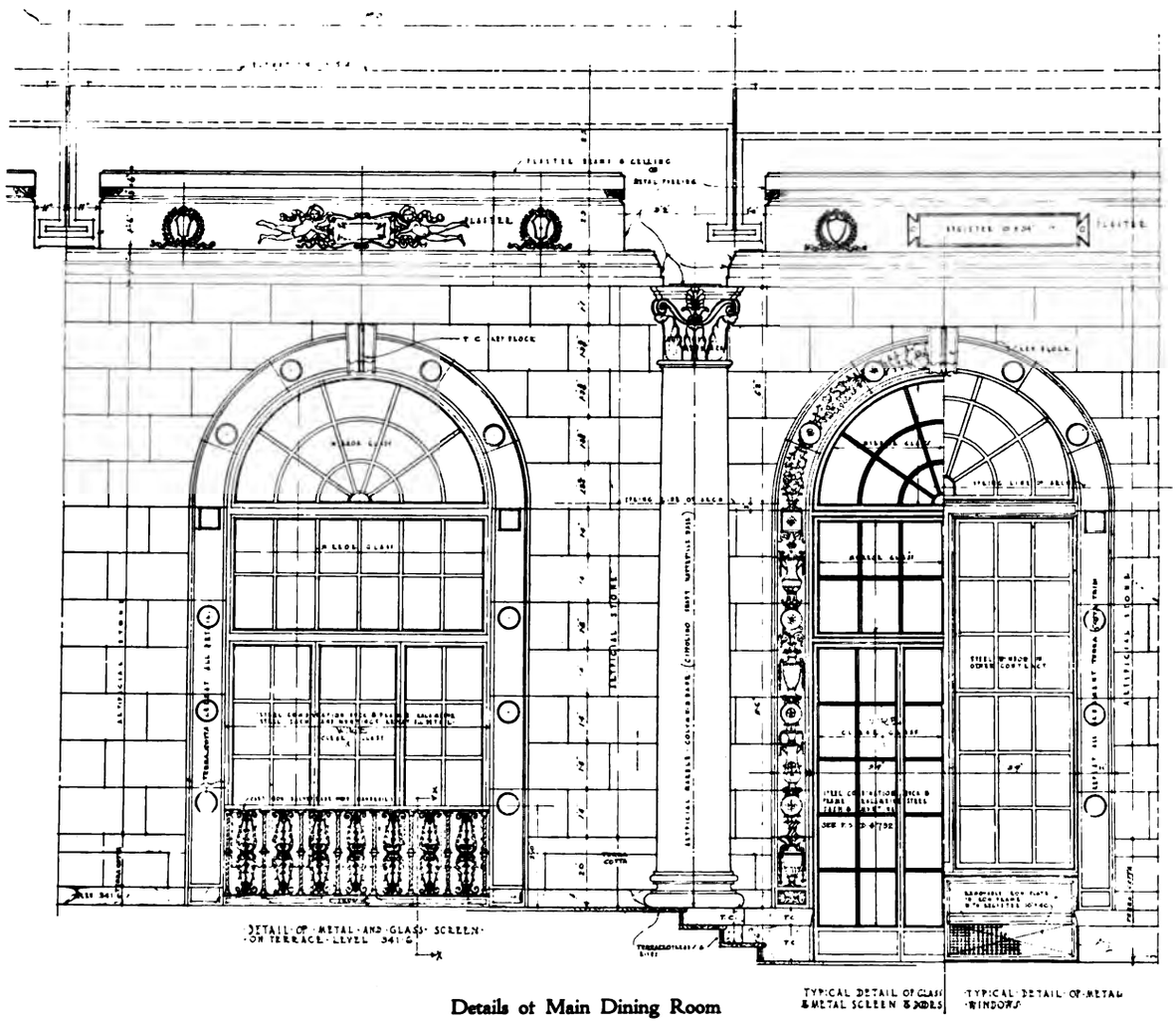
McKIM, MEAD & WHITE, ARCHITECTS

The first bedroom floor is typical of all, except that at the easterly end, over the driveways, is a Turkish bath establishment with separate plunges, steam rooms, etc., for men and women. The bedroom floors from the second floor to the seventh floors inclusive are typical except for special suites on the seventh floor and the sixteenth floor with larger bedrooms, living room, dining room and serving pantry. On the so-called third floor we find the first of the typical bedroom floors, of which there are seventeen.

The entire roof on the west, or Seventh Avenue end, is occupied by a roof restaurant usable all the year around. It is really a big roof house and can be used as a summer dining room or during the other parts of the year as a banquet room. The roofs of the other wings are left open for future development. It is proposed that the roof of the second wing be used for an open-air roof-garden, and it has been connected by a bridge across the first court with the roof restaurant. Provision has been made in the framing of the building by which this scheme of bridges can be extended across the entire series of courts.

In order to relate the exterior of the building with the Pennsylvania Station opposite, the lower stories to a height equal to that of the station have been treated as a solid base faced with Indiana limestone and given a monumental character by an order of Roman Ionic pilasters. The walls between the pilasters are lightly rusticated and there is a story of ashlar above. The main entrance in the center of the Seventh Avenue facade is emphasized by a portico with six Ionic columns.

With respect to the problems of interior architectural design and decoration, the hotel affords abundant opportunity for study. Entering the main lobby, the effect of spaciousness is so happily impressed on the mind, that the thought of being at the bottom of a twenty-story building is en-



Details of Main Dining Room

tirely lost. This effect is enhanced by the use of a metal-and-glass ceiling over the central portion of the main lobby, lighted from above by indirect electric lighting. This gives a glow of moderate intensity, supplemented by various ceiling fixtures in the galleries and by standards on the floor.

The main lobby is Roman in architectural character, in scale and detail harmonious with the motifs adopted for the Pennsylvania Station, but with a domestic note. Extensive use has been made of artificial marble made on a base of Keen's cement, applied to the walls and columns and finished by polishing in the same way that marble is worked. The floor of the main lobby is terrazzo, interest and distinction being added by using this material in combination with lines and borders of mosaic.

The bar room on the left of the main entrance has been treated in the Italian style, with artificial travertine walls, a vaulted plastered ceiling, wainscot of oak, and floor of tiles. The men's café to the right of the entrance is Georgian in feeling, executed in natural chestnut wood, panelled to the ceiling. The tea room is carried out in the spirit of the English work of the Adam period, but with free adaptation of the Italian sources of that style, rather than a close following of the Adam details.

In the main dining room there is also a distinctly Italian character, with wall base, and door trim of terra cotta, artificial limestone walls and a beamed ceiling which has been carefully studied in color to increase the apparent height of the room and has been treated to give the effect of the old wooden beamed ceilings. Color is introduced in the draperies and lighting fixtures, against the warm neutral tones of the walls.

The ballroom, the foyer and the parlors which lead into it are likewise carried out in the spirit of the Italian Renaissance. In outline and decoration the ballroom shows a serious effort to preserve the traditions of the best examples of this period, and inspiration has been drawn from the fresco decorations by Giovanni da Udine in the Villa Madama and the Vatican in Rome.



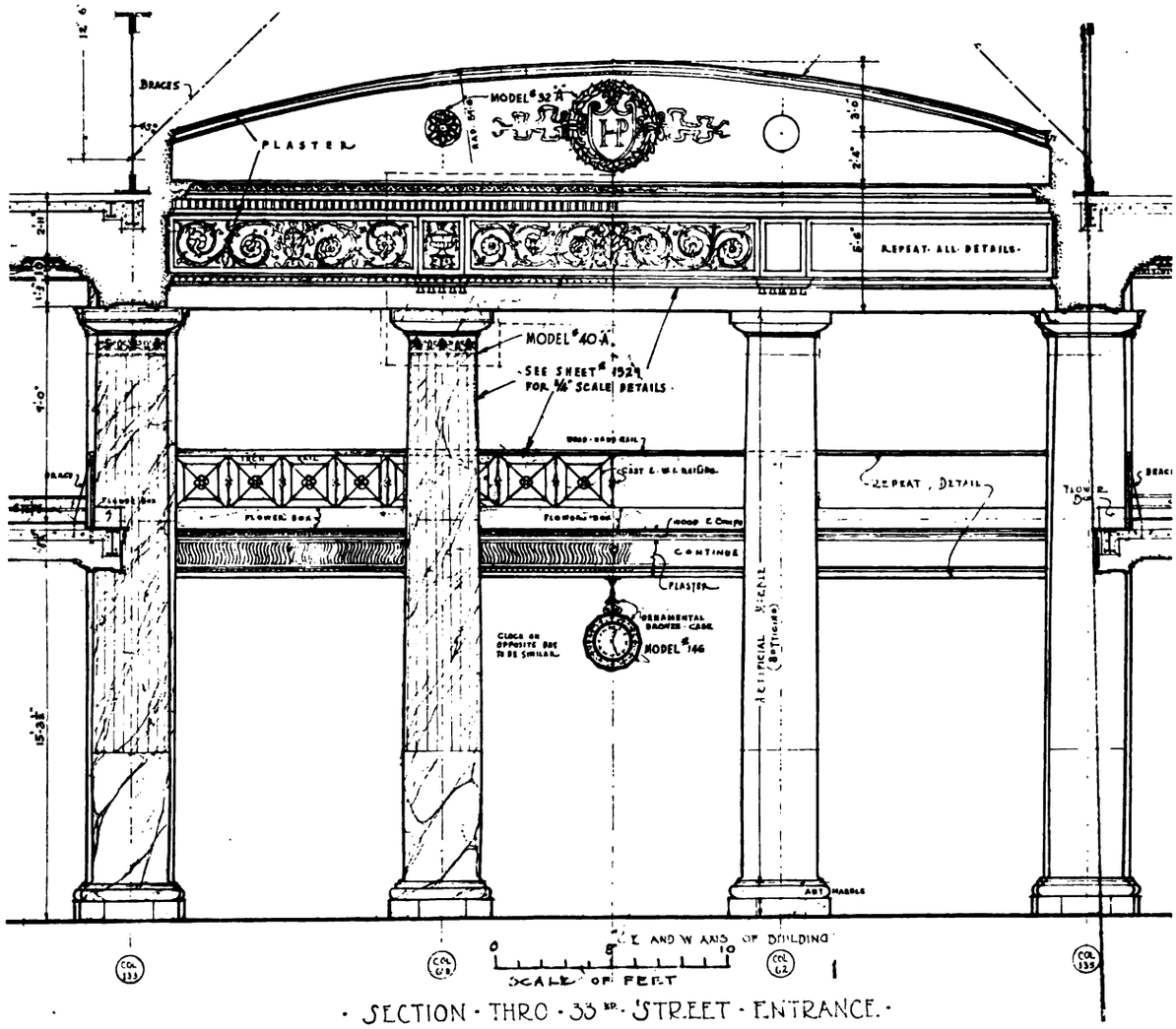
Central Feature, East Wall of Dining Room

The large banquet room on the ballroom floor is treated with oak panelling, Italian in detail, to the ceiling, and the private dining rooms on this floor are treated with wooden mouldings and pilasters, Georgian in detail, applied to plastered walls. The grill room shows a distinct departure from the usual underground or rathskeller type. A bright and cheerful room that suggests the garden of a villa in the best Italian Renaissance manner is the result. It has a tile floor, terra cotta wainscot, and walls and piers of sgraffito and stucco.

In working out the color scheme of decorations the architects called into consultation the eminent artist, Jules Guérin, who was of the greatest assistance in producing a distinguished and harmonious result. The carpets, furniture and draperies were installed by the Hotels Statler Company, Inc., who placed this work in the hands of Mr. Louis Rorimer of Cleveland. Mr. Rorimer has been in charge of the decoration and furnishing of the other Statler hotels. The architects have at the request of the Pennsylvania Railroad Company served in an advisory

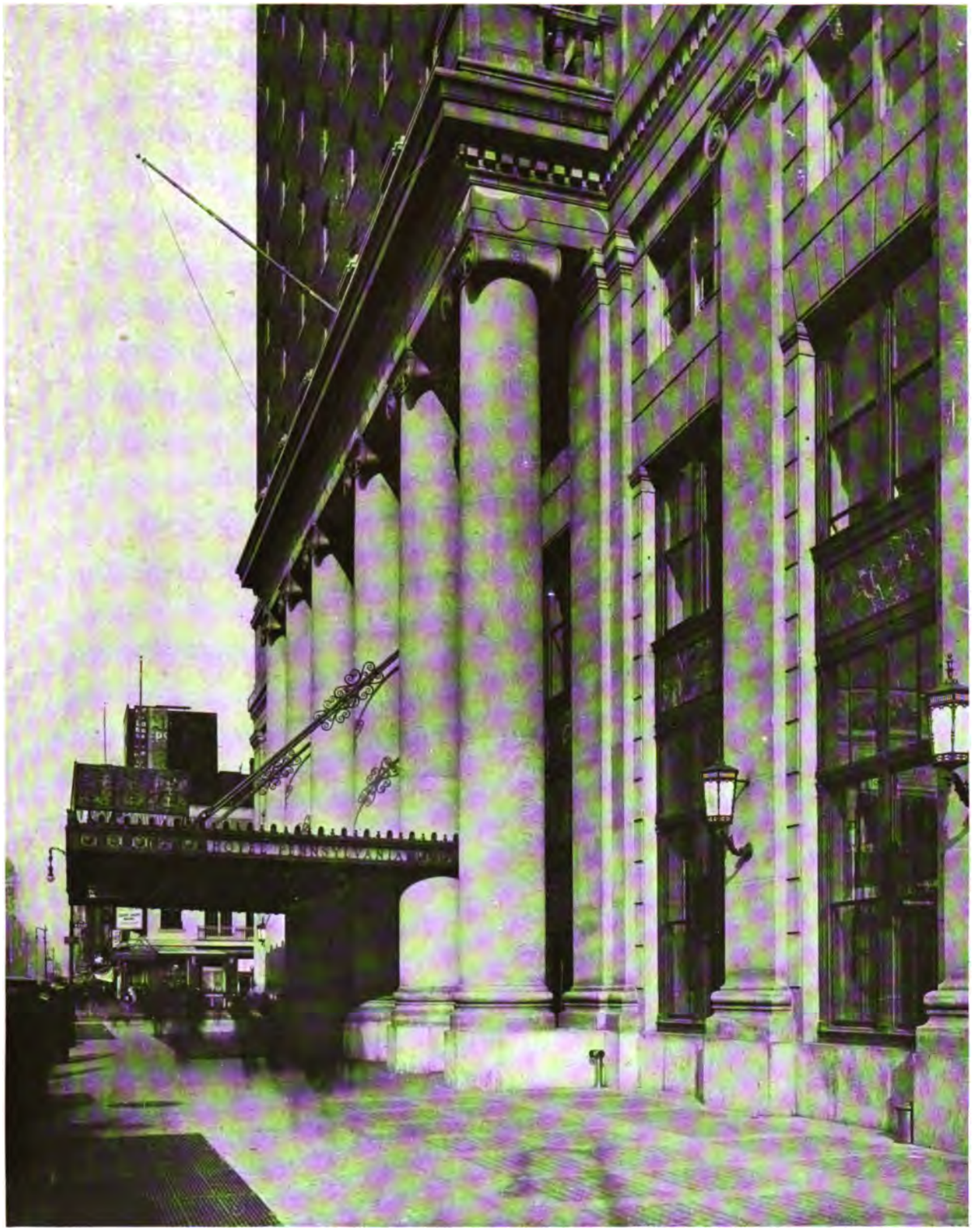
capacity in regard to all the furnishings that went into the hotel. The architects have made an unusually interesting series of rooms by the use of Italian motives and their derivatives, found in the Adam and Georgian styles, applied as has always been the policy of the firm, with the purpose of fitting them closely to the solution of the problem in hand.

Though entirely different in the spirit of their decorative treatment, the interiors of these two new hotels that mark the latest development in interior architecture and furnishing for large hotel projects, are alike in the fact that color and ornament, furniture and furnishings have been chosen with the evident thought of producing an atmosphere quite different from that which we are accustomed to associating with the public rooms of large hotels. There is an absence of the familiar tendency toward the pompous, over-rich and rigidly formal in both the treatment of the walls and ceilings and in the furnishings. This is a distinct improvement, for it brings to hotel decoration a new dignity which it could never have attained so long as ostentation was among its leading characteristics. This new tendency brings with it also an air of homelike comfort that contributes very largely to the satisfaction of the guest wearied by traveling, and does much to increase his esteem for the hotel. This has a business aspect for it means that guests are likely to become regular visitors stopping at the hotel whenever they are in town. At the same time that a homelike air has been introduced into the public rooms of these hotels, a high degree of dignity has, in general, been maintained and the sense of largeness of scale has in no wise been diminished.



· SECTION · THRO · 33RD · STREET · ENTRANCE ·

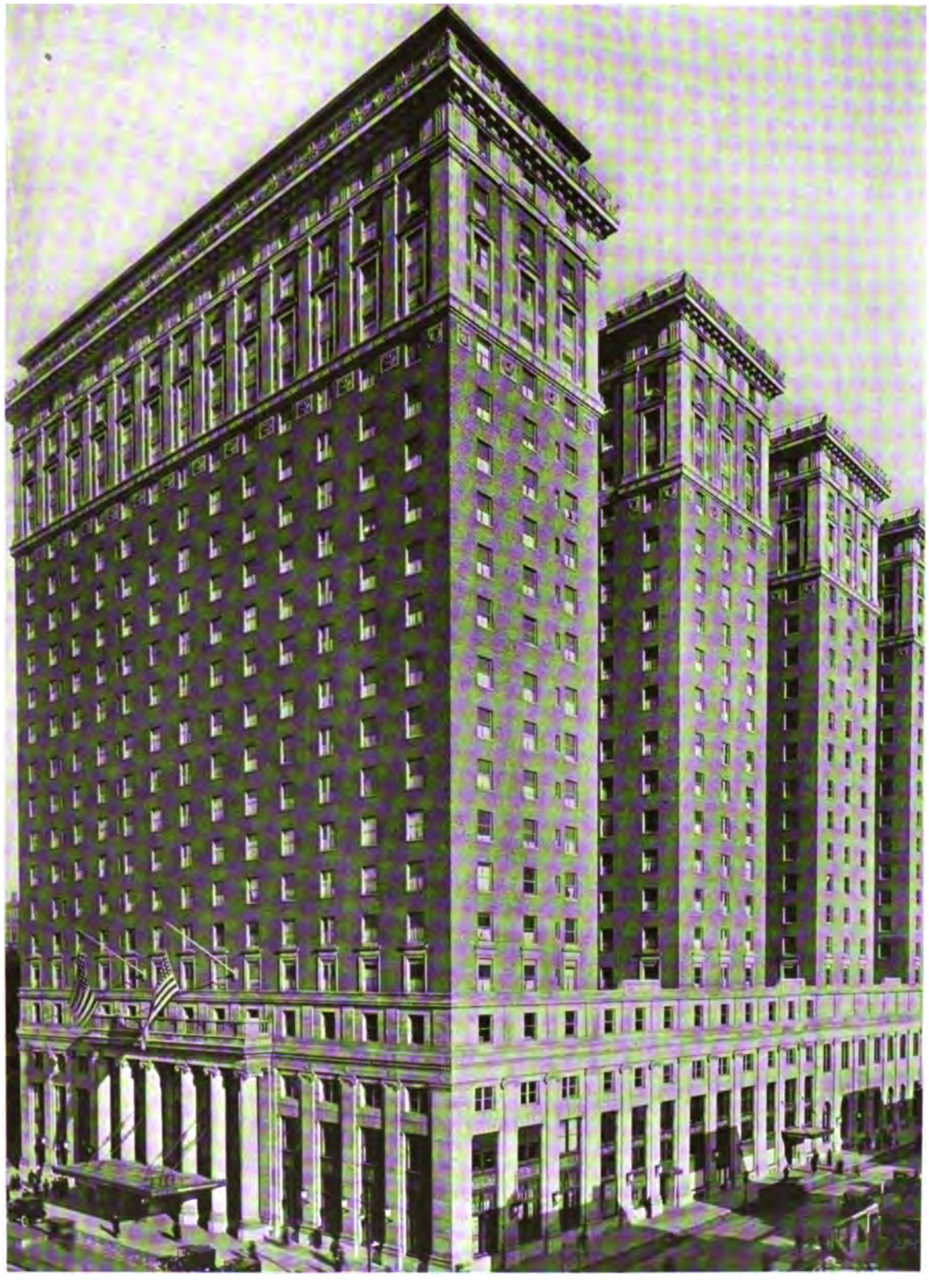
Main Lobby



DETAIL OF SEVENTH AVENUE FAÇADE

THE HOTEL PENNSYLVANIA, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS



GENERAL VIEW OF EXTERIOR

THE HOTEL PENNSYLVANIA, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS



ENTRANCE FOYER AND LOBBY



LOBBY

THE HOTEL PENNSYLVANIA, NEW YORK

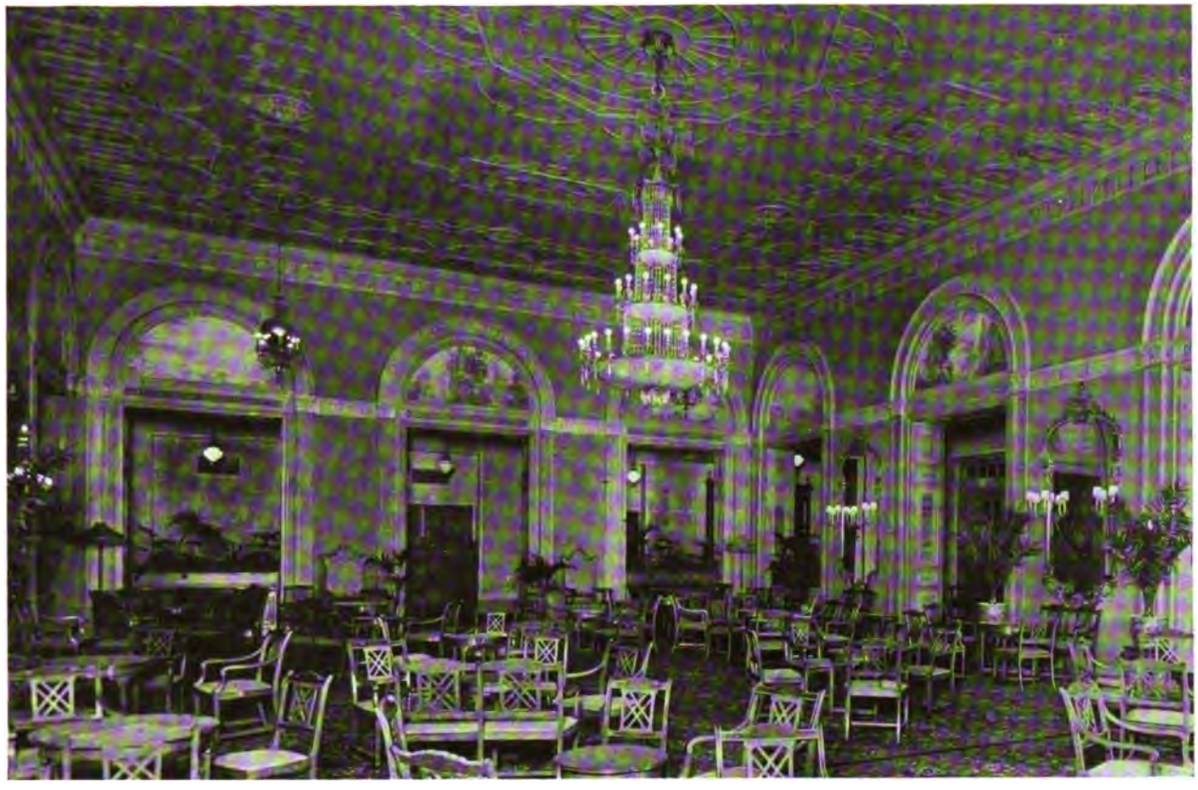
McKIM, MEAD & WHITE, ARCHITECTS



TERRACE IN MAIN RESTAURANT

THE HOTEL PENNSYLVANIA, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS



THE PALM ROOM



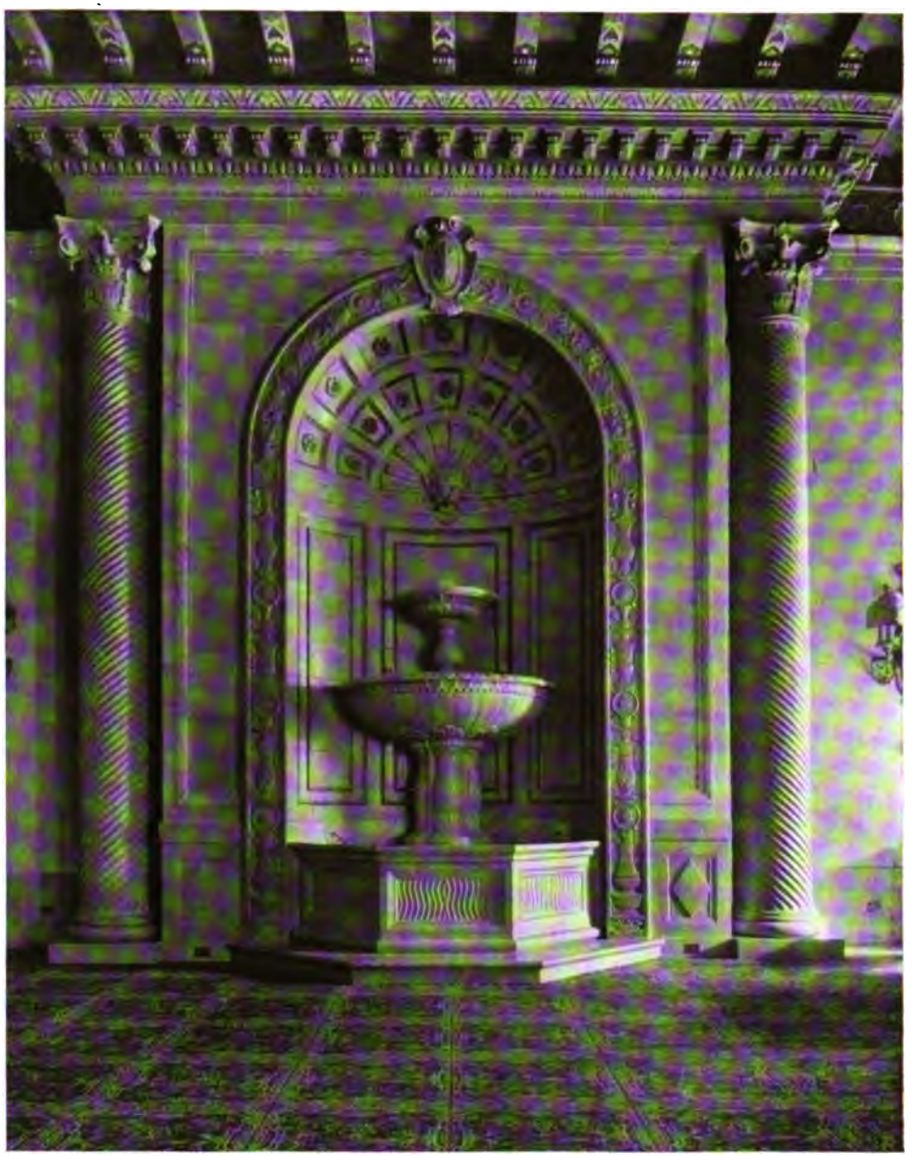
THE MAIN RESTAURANT

THE HOTEL PENNSYLVANIA, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS



DETAIL OF PALM ROOM



DETAIL OF DINING ROOM

THE HOTEL PENNSYLVANIA, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS



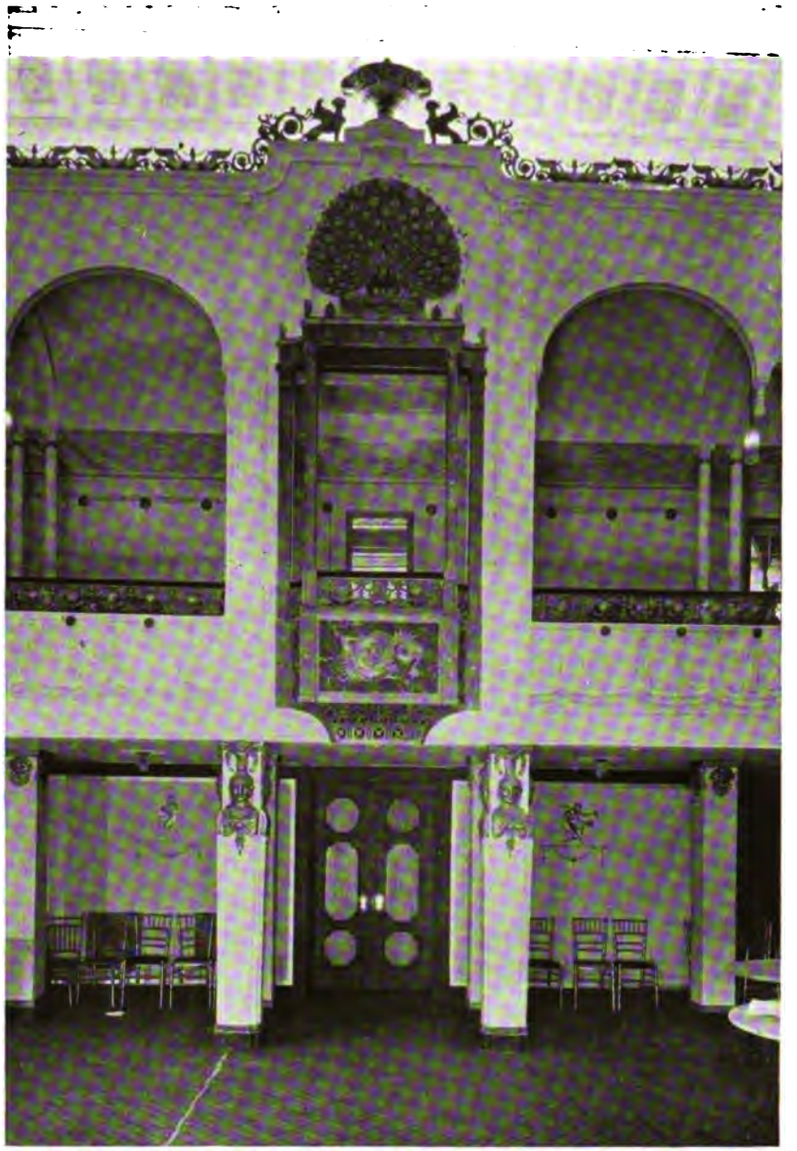
THE BALLROOM

THE HOTEL PENNSYLVANIA, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS



MAIN STAIRWAY IN LOBBY



DETAIL OF BALLROOM

THE HOTEL COMMODORE, NEW YORK

WARREN & WETMORE, ARCHITECTS



LOBBY

THE HOTEL COMMODORE, NEW YORK

WARREN & WETMORE, ARCHITECTS



LOBBY FROM MEZZANINE STAIRWAY

THE HOTEL COMMODORE, NEW YORK

WARREN & WETMORE, ARCHITECTS



MEN'S DINING ROOM

THE HOTEL COMMODORE, NEW YORK

WARREN & WETMORE, ARCHITECTS



MEN'S LOUNGE

THE HOTEL COMMODORE, NEW YORK

WARREN & WETMORE, ARCHITECTS



BALL ROOM FOYER

THE HOTEL COMMODORE, NEW YORK

WARREN & WETMORE, ARCHITECTS



GRILL ROOM

THE HOTEL COMMODORE, NEW YORK

WARREN & WETMORE, ARCHITECTS



CAFE

THE HOTEL COMMODORE, NEW YORK

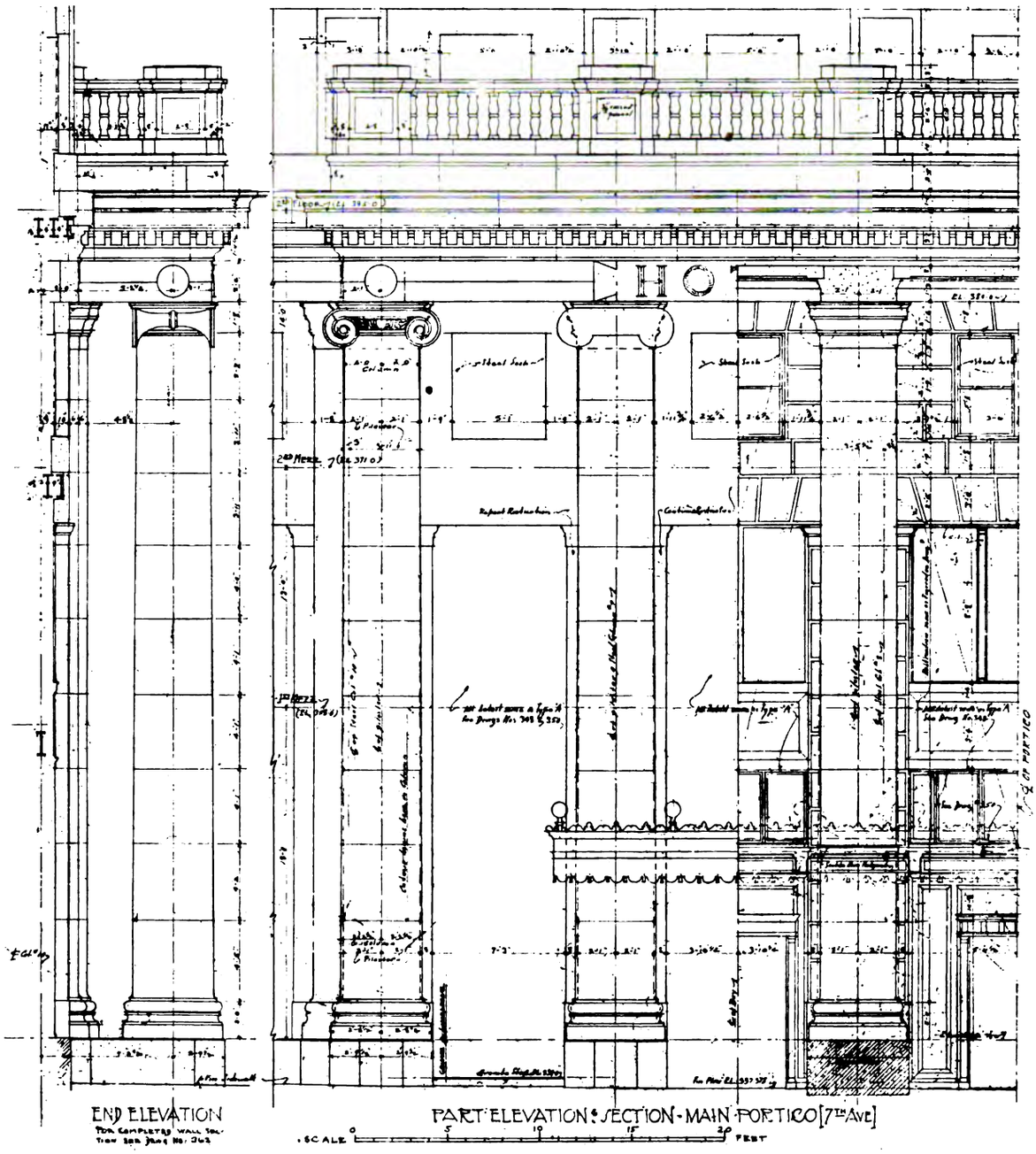
WARREN & WETMORE, ARCHITECTS



LUNCH ROOM

THE HOTEL COMMODORE, NEW YORK

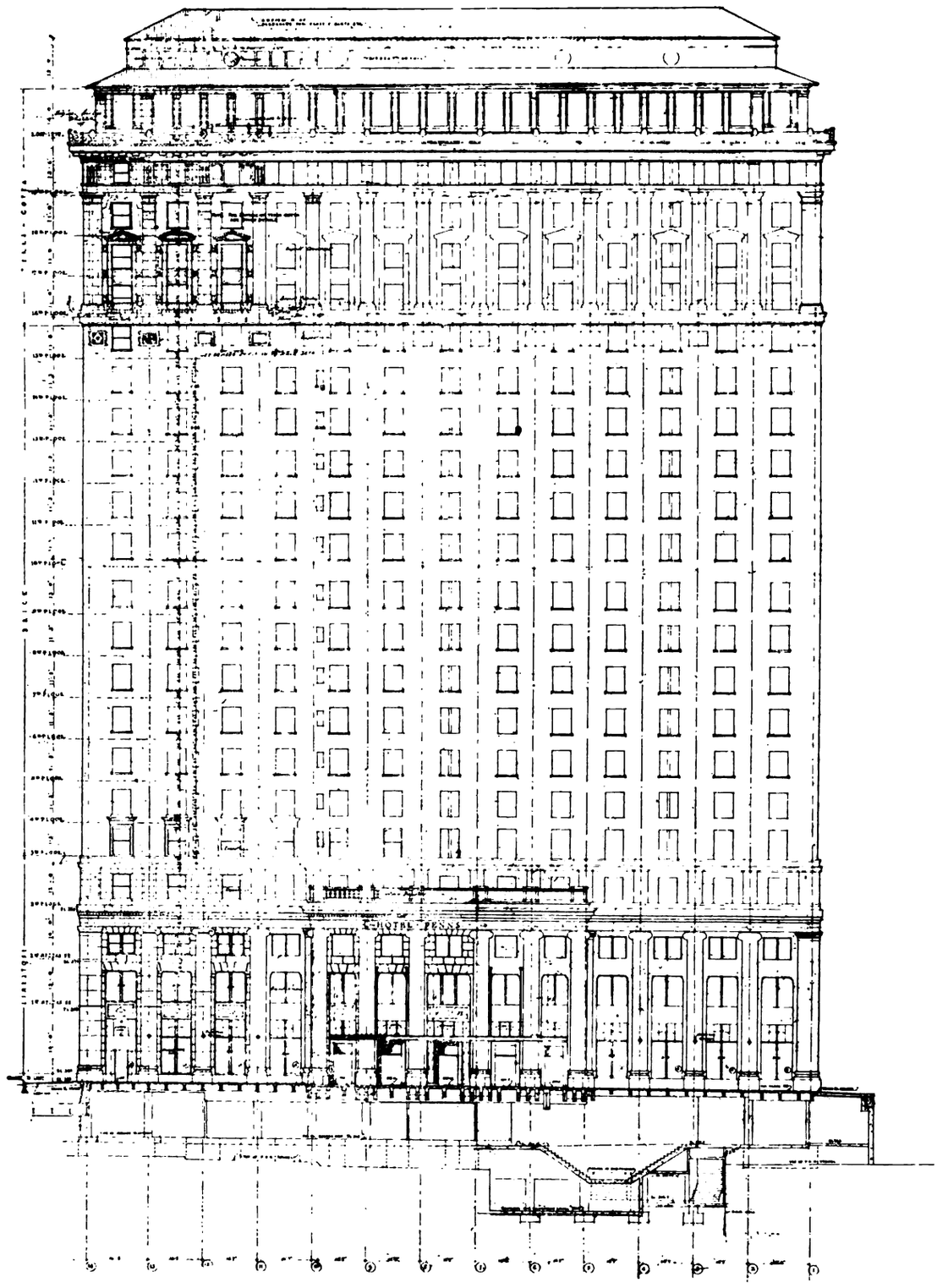
WARREN & WETMORE, ARCHITECTS



DETAILS OF SEVENTH AVENUE FACADE

THE HOTEL PENNSYLVANIA, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS



SEVENTH AVENUE ELEVATION

THE HOTEL PENNSYLVANIA, NEW YORK

McKIM, MEAD & WHITE, ARCHITECTS

THE HOTEL COMMODORE, NEW YORK

WARREN & WETMORE, ARCHITECTS

THE Hotel Commodore connects directly with the Grand Central Terminal, the Lexington Avenue subway, the Madison and Fourth Avenue surface car lines, and the Forty-second Street crosstown cars. The elevated structure on which the shuttle trains now run from the Third Avenue elevated line to the Grand Central Terminal will be taken down in the near future, it it said, opening to view the 42nd Street front of the hotel, now disfigured by its presence. There is a movement on foot to make the plot across the street, formerly the site of the old Grand Union Hotel, a public park to be known as Pershing Square. This will give an open space in front of the hotel and a broader and more impressive approach.

The tracks of the New York Central Railroad run under the hotel, which has necessitated placing the kitchen above ground, where it gets very good light and ventilation. An unusual feature is the approach from the viaduct on the upper level of the Grand Central Terminal, which is located immediately to the west of the Hotel Commodore. This brings the approach from this direction to the ballroom platform and banquet room entrance, giving easy access to the ballroom, which is one floor above that level.

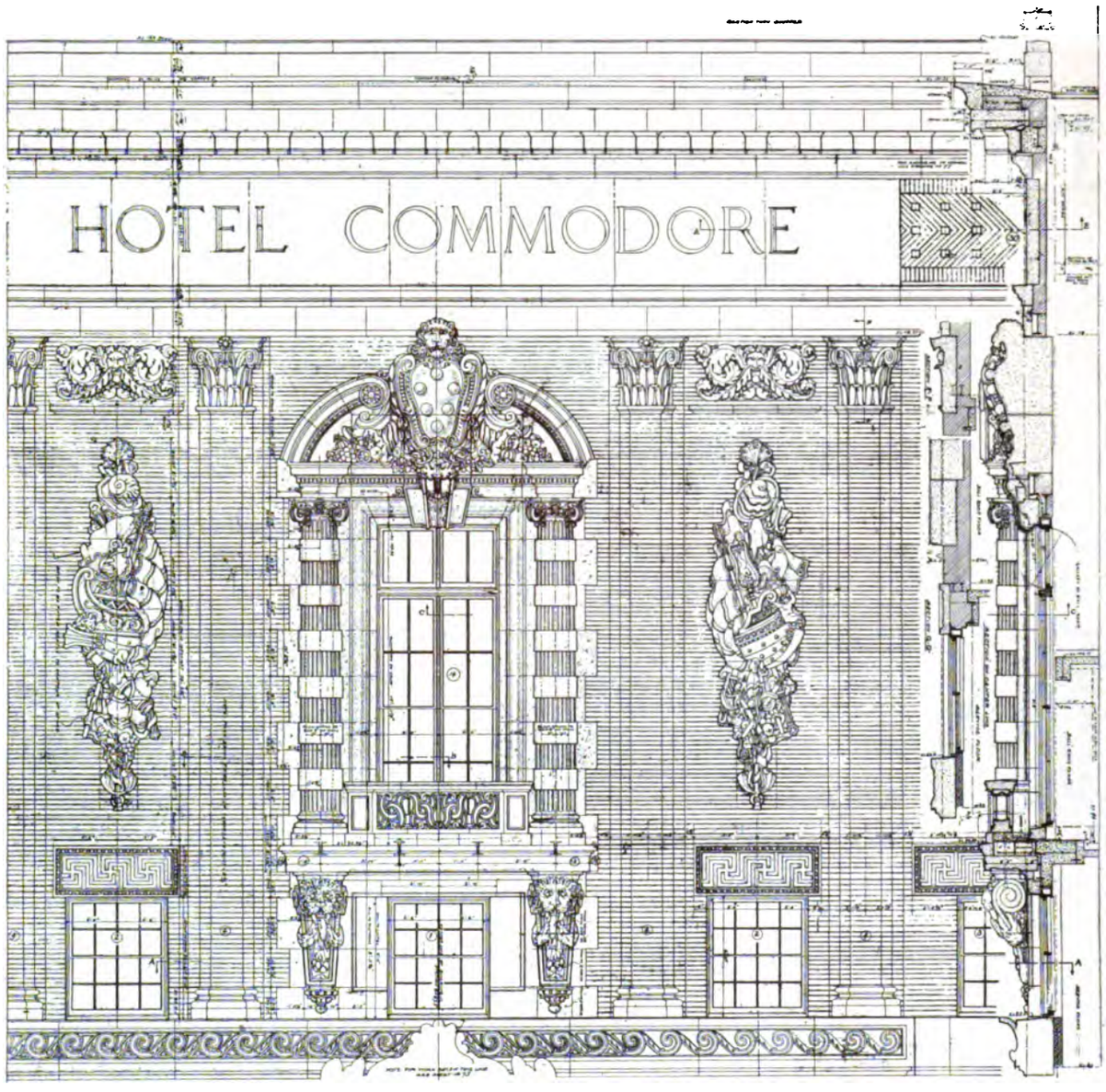
Going into the ballroom, you arrive at the mezzanine level; there you walk up a short flight of stairs to the dressing rooms and coat rooms.

Going up to the typical plan, one notes that, differing from other hotels, there are absolutely no rooms on courts. The rooms on what are called the courts are really better than those on the streets.

Every bedroom is supplied with a bath. There



Lobby Terrace, Looking toward the Main Dining Room



Detail ot Forty-second Street Facade

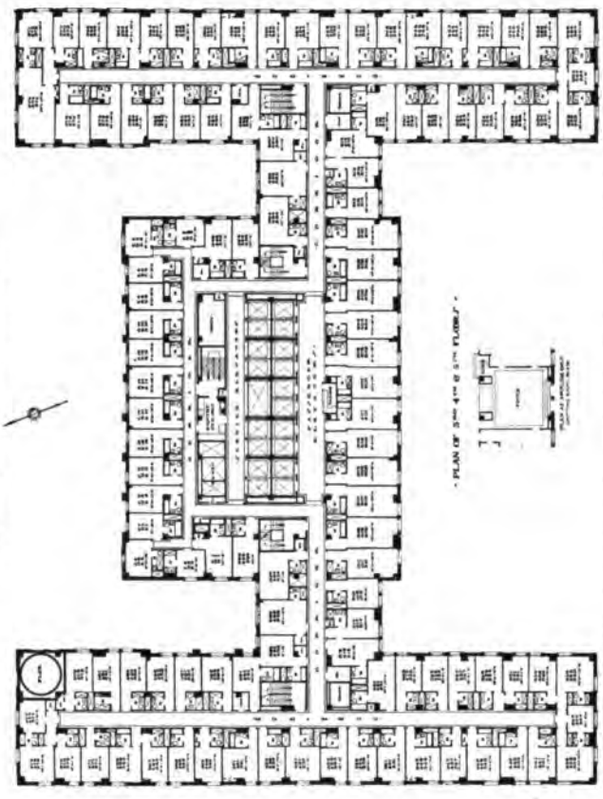
are parlors at desirable corners, arranged in suites. Some of the less expensive rooms have showers instead of baths.

The engineering problem from the street level down is probably the most difficult that ever confronted a hotel designer. In the development of the plans for the neighboring Hotel Belmont and the Biltmore, the architects ran into some difficult problems in subsurface construction, but the Hotel Commodore raised much greater difficulty owing to the various subway tracks and the New York Central Railroad and New Haven & Hartford Railroad tracks. For example, all building columns of every description have been isolated from subway or railroad terminal columns, to avoid absolutely any vibration from the movement of trains below.

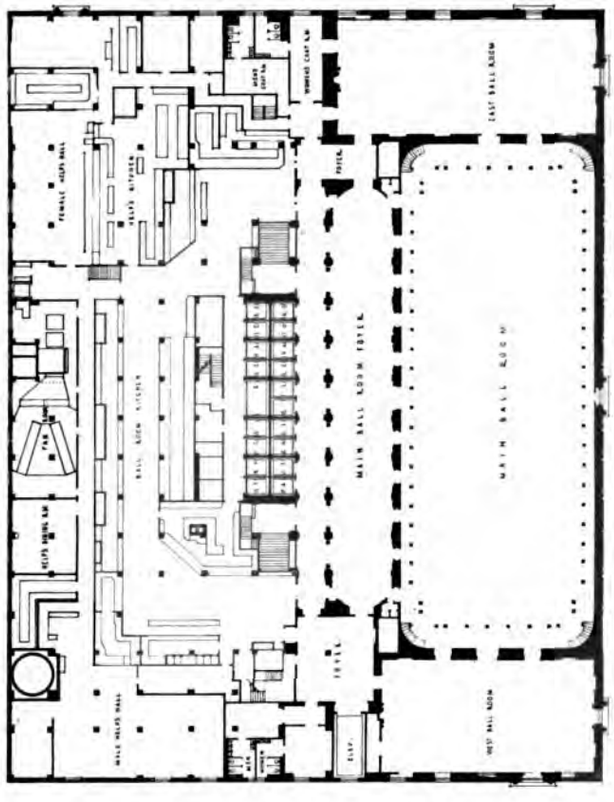
The idea of governing the street elevations was to construct a building that would serve transient business exclusively—"A room and a bath for two and a half." Very little money was spent on architectural effect, the treatment being of the simplest type, but the materials used are all of the best quality. The exterior trimmings are of carved limestone and the detail is suggestive of the French Renaissance.



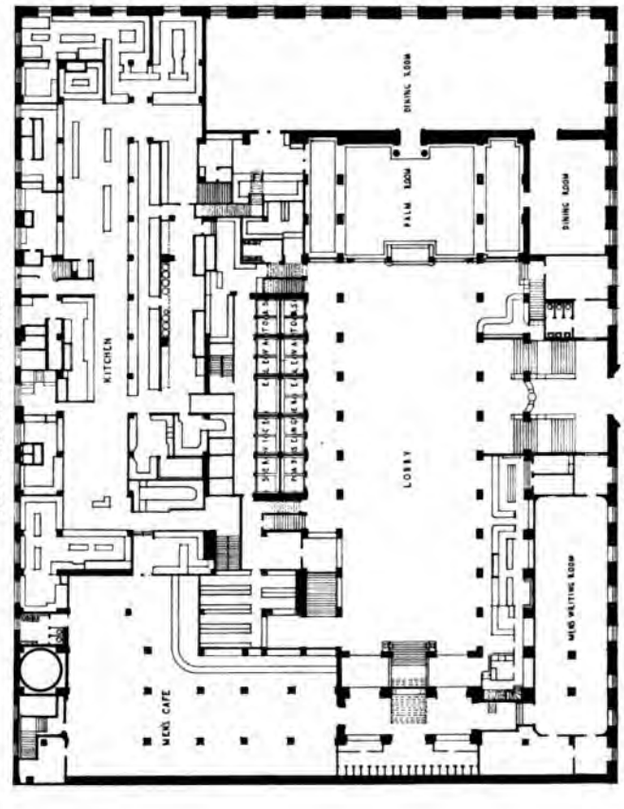
TYPICAL BEDROOM FLOOR PLAN



PLAN OF THE THIRD, FOURTH AND FIFTH FLOORS



BALLROOM FLOOR PLAN



LOBBY FLOOR PLAN

THE HOTEL COMMODORE, NEW YORK
WARREN & WETMORE, ARCHITECTS

The ballroom across the 42d Street front is without windows because all of the functions that are held in a place of this kind run much more smoothly in artificial light.

The elevator banks lie straight before the main entrance on 42d Street. There is a bank of ten elevators. At the left as one enters, is the office, along the 42d Street side.

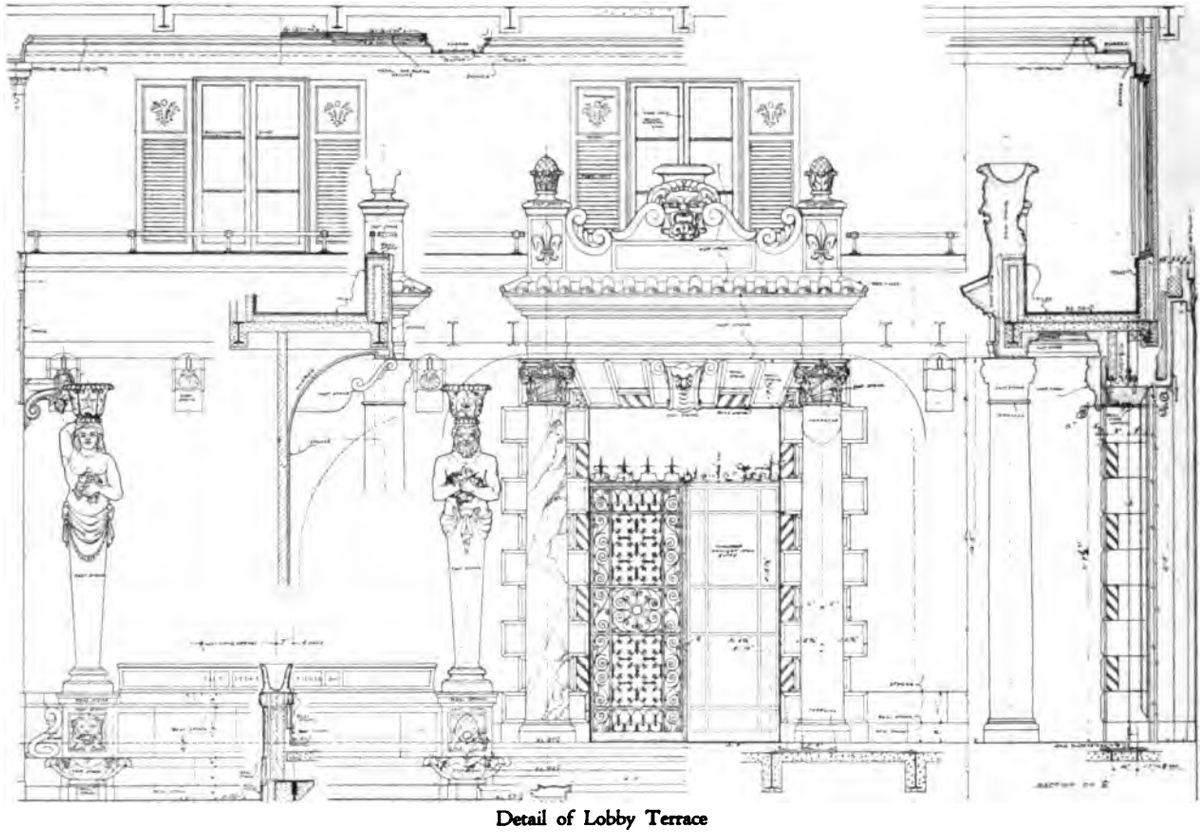
The tracks running under the hotel made it necessary to raise the lobby above the street level.

The idea of the plan worked out by the architects is to develop an approach from the steps that lead up from the 42d Street entrance, a rise of about ten feet to the lobby.



Detail of Dining Room

At the west end of the lobby the telephones, telegraph office, cable office, men's reading room, public stenographers and stock boards have been well placed, so that all the men's interests are concentrated in one portion of the lobby. At the east end of the space, where the comfort of the women guests is taken care of, is a palm room in the form of a terrace where tea is served. The main restaurant, a smaller restaurant and the ladies' coat rooms are also located at this end. In this way the portion of the main floor devoted to business interests is definitely



Detail of Lobby Terrace

separated from that given over to the women, and to the social side of life.

All around the big lobby is a commodious gallery, 16 feet wide, which is furnished as a lounge, supplied with comfortable couches, writing tables and the like. Opening off this mezzanine or gallery are a very modern women's hair-dressing room, the executive offices of the hotel company and the women's rest and writing room.

The controlling idea back of the big lobby was to make it convey the suggestion of an Italian courtyard and patio, roofed with glass and having rough plastered walls as a background for plants and heavy hangings. An effort has been made to get away from the elaborate and expensive type of lobby seen in most New York hotels.

The lighting in the main lobby is all indirect and so screened that the source is difficult to discover. Large columns support urns in which lights are concealed that cast light on the ceiling that is as near the color of sunlight as modern science has made it possible to obtain from artificial sources.



Detail of Ballroom Foyer



Fireplace in Men's Lounge

In the terrace, four steps up from the main lobby level, at the easterly end, is the palm room. It is really very cleverly done in the manner of an Italian garden and the impression is heightened by the sound of running water in the fountains. The ceiling of the main lobby and the ceiling of the mezzanine were decorated in the Italian manner by Mr. John B. Smeraldi.

At the easterly end, the main dining room already referred to, is done in American walnut, with a vaulted plaster ceiling in low relief, having painted medallions done in monochrome. A feature of this room is the lighting which is concentrated in big sconces which are combined with the system of ventilation. The supports have open work through the perforations of which air is drawn or forced out.

At the west end is the café, having a vaulted ceiling of English geometric pattern in which all the mouldings were run by hand to give them the vigor and irregularity found in old work. The room is wainscoted in English oak with pilasters. The ventilation is concealed in various ways, for example, in chests and in pieces of furniture, all done with care. The floor is of black and white terrazzo tile. The wood is English oak, fumed and waxed. The men's writing room on the main



Entrance to Men's Café

floor, opening onto 42nd Street, is very bright and exceptionally well carried out. It has oak paneling. The telephone, telegraph and stock board, news stand, theatre ticket office and flower stand have all been distributed in this section with great care. The arrangement of the office is the result of a competition for a prize among the employees of the various Bowman hotels and is believed to be the most up-to-date and efficient that has yet been devised.

On the street level is the lunch room with walls perfectly plain and with some inexpensive Pompeian decorations. The floor is interesting, however, having borders of black and white mosaic and red and yellow tiles worked in, also insets of brass in the form of fish, sea horses, etc.

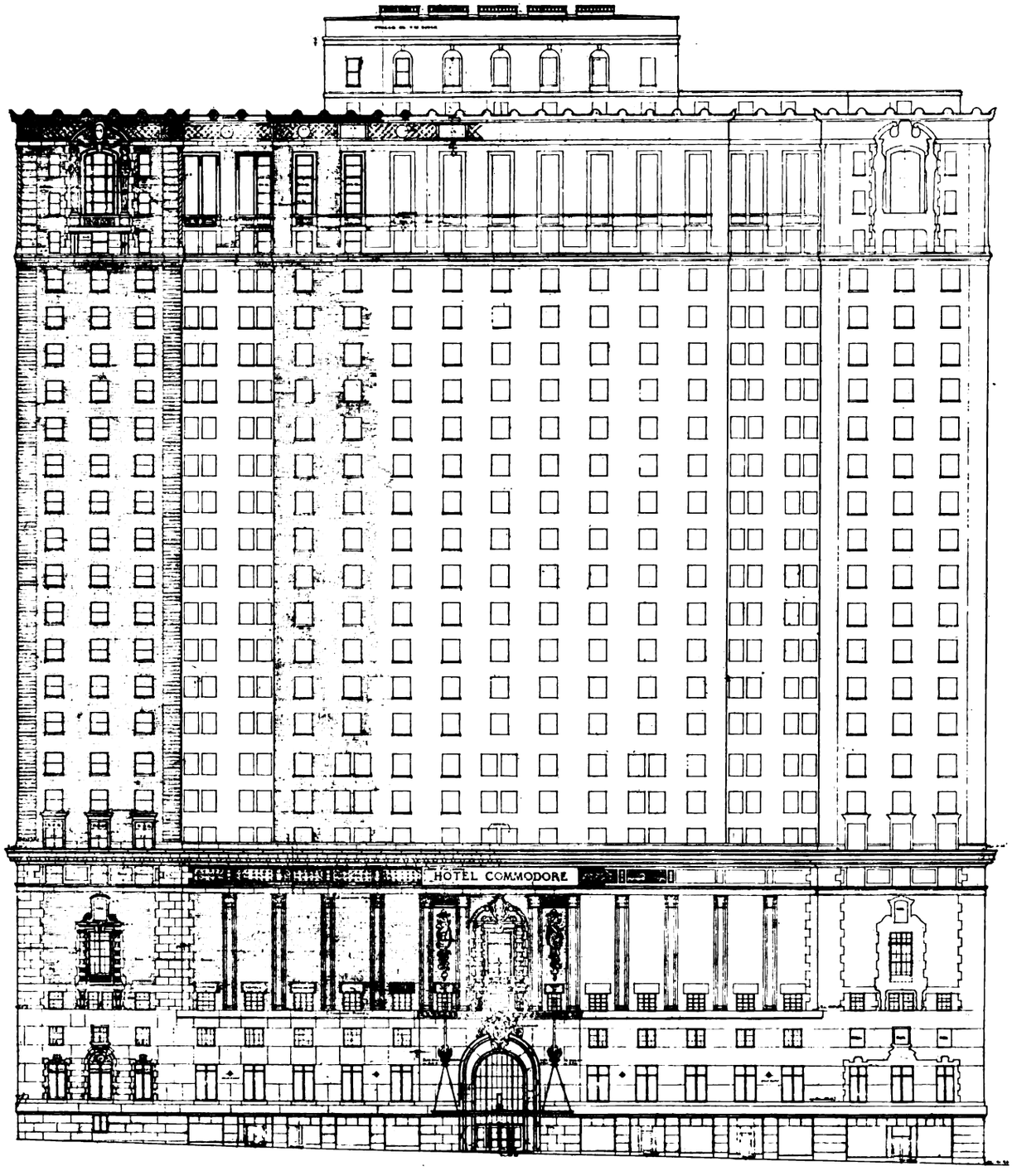
Also on the street level is the grill room, one of the most interesting rooms and, probably, the most successful in the hotel. The guests arrive on a terrace and as they descend to the main room they see an interesting treatment done in the old English manner with chestnut giving the color note; and generally carried out in the style of the English Gothic. There are niches in which seats are placed and in which leaded glass windows lighted by artificial means add to the charm of the room as a whole and take away the suggestion of the subterranean location and the stuffiness characteristic of most underground dining places. The ceilings in these rooms are made of very large beams, the result of the requirements of the superstructure which is carried thereon. These have been carefully treated by Mr. Smeraldi in early English heraldic decorations.

The main kitchen on the main lobby floor is a very fine installation, running the entire length of the building and planned so as to have outside light. From this room, service may be had directly into the main restaurant, the palm room and the men's café which are all on the same level as the kitchen. Service may also be had from the kitchen into the grill room and lunch room on the street level. It is quite unusual to have a kitchen serve five big rooms and still have to descend only one short flight of steps in any case.

The ballroom is approached from the coat room floor below with its spacious stairways. As one leaves the elevators one enters the great foyer which runs the entire length of the ballroom, decorated in stone with vaulted ceiling, painted. The doors along the entire length of the foyer lead directly into the ballroom making it a very simple matter on the occasion of very large banquets to fill the banquet tables quickly, in contrast with some hotels where there is only one door. It is



Corner of Grill Room



Forty-second Street Facade

probably the biggest ballroom in the country in a building of this kind, measuring 70x180 feet. Owing to labor difficulties, it was impossible to finish the room in time to decorate it as intended at first, and the present color scheme of orchid and emerald green is merely a temporary one.

The hotel was furnished by Mr. Herbert R. Stone, who has charge of all the decorations in the Bowman chain of hotels. He performed his part with thoroughness and good taste.

THE REVIEW OF INTERIORS

Department Edited by J. H. Phillips.



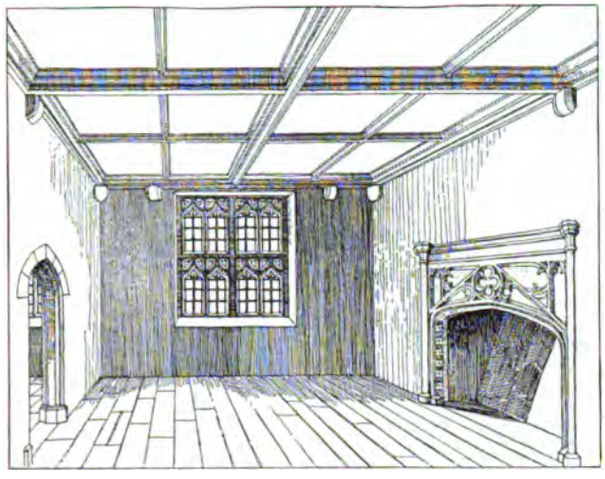
OLD ENGLISH INTERIORS

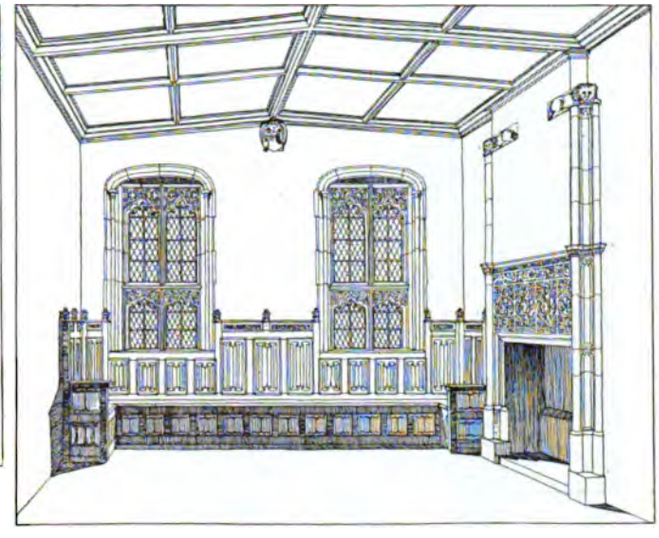
OLIVER GOLDSMITH wrote that he liked everything old—old friends, old times, old manners, old books, old wine. He naturally must have included old English interiors, for it would have been impossible to have the proper environment for those old times without them.

The desire on the part of so many collectors



The Entrance Hall, East Sutton Place, Kent, from a Sketch by C. J. Richardson





Withdrawing Room, Kingston Seymour Manor House, above
Parlor in the Abbot's House, Machelney, Somersetshire, at the right

to acquire original panelled rooms, mellowed by time and rich in historic and romantic interest has grown of late. Many such rooms have been brought to this country, in fact the sale of a famous old portrait may require the exportation of the old Elizabethan panelling, which surrounded it.

Upon close study of the old English interiors, they unfold themselves. Tudor architecture appeals to us for many reasons, but most of all because of its human associations. Another reason is that there is so much freedom shown in the Tudor interiors, the spacing of windows, so monotonous in most interiors, is relieved by the grouping and by the use of the oriel, our American bay window.

If one were asked to give the main characteristics of this period, the oriel windows might well be mentioned first; and they also play a most important part in the effect of the interior. Most of our modern interiors have light not alone from one side, which is best, but from four sides in many cases.

Second in importance is the freedom in spacing of the panelling, giving greater interest.



Dining Room in the Residence of Allan Lehman, Esq., inspired by a
Fifteenth Century House in Somerset, England
John Russell Pope, Architect — Schmitt Brothers, Decorators

Third, the great variety of ceiling design usually of plaster, and the personal interpretation and use of the pilasters and cornices — the architectural features which give such a naive touch and so much charm to the work.

It requires little effort of imagination in studying the illustrations of Plas Mawe, Wales, and Haddon Hall, to realize that they were admirable settings for



Robert Gwynne's Room, "Plas Mawe," Wales



Queen Elizabeth's Bedroom, "Plas Mawe," Wales

scenes of pomp and splendor, for festivities and pageants of all kinds. Haddon Hall, the old house situated so picturesquely on sloping ground, is associated with many legends, including the courtship and elopement of the celebrated Dorothy Vernon.

Sir George Vernon, known as the "King of the Peak," on account of his magnificent style of living, was responsible for many of the additions to this building in the Sixteenth Century, while the wonderful "long gallery" is to the credit of his daughter Dorothy Vernon, who married Sir John Manners.

This interior is a classic. Imperfect as it may seem to the lover of the rare Greek examples of architecture, it will always command our admiration, being an interior of rare imagination and charm.

It is the personal and sentimental interest which helps us to appreciate the work of the men who built and decorated the old English interiors where the history of so many notable families began. The beautiful examples England has furnished us are an inspiration to those who have a passion for creating interiors that embody the lives of people, for every detail is full of character and human interest.

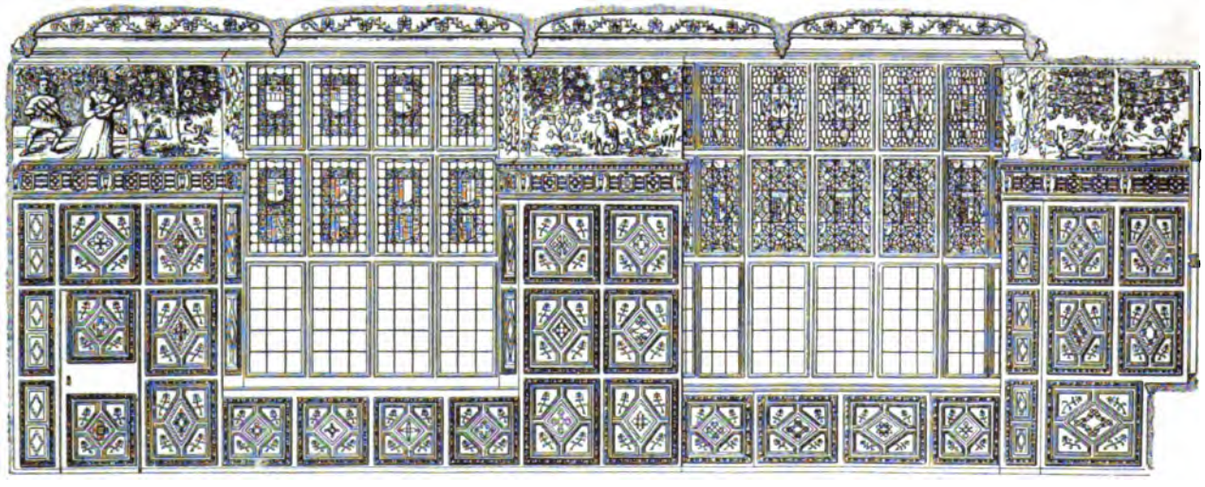


The Long Gallery, Haddon Hall



The Drawing Room at Haddon Hall

This style of interior reached its zenith in the time of Elizabeth and was favored for both town and country dwellings



Side of Dining Room at Gilling Castle, Yorkshire



Elevation of Mantel Side of Living Room in the House of Mrs. James Shewan, Jr.
Inspired by an old interior of the period but studied with a view to satisfying an American's taste and the requirements of comfort
J. H. Phillips, Architect



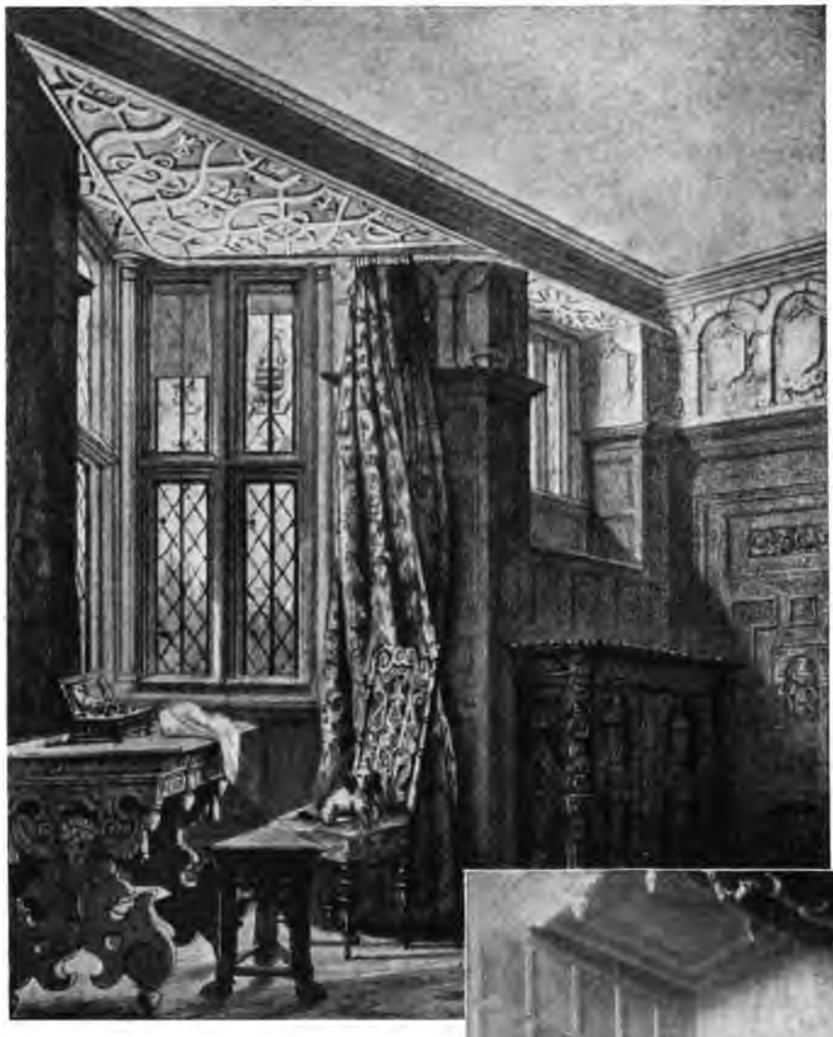
The Drawing Room, Chastleton House



King Charles Room, Bradninch Manor, Devon
Courtesy of Country Life, London



A Jacobean Bedroom in the Residence of Mr. Arthur Locke, Radford, Bradninch Manor, Devon



Little Charlton, Kent

A corner of a Jacobean interior showing a most unusual oriel window, luxuriously furnished, with figured hangings, antique rugs and rare old furniture pieces. From a sketch by C. J. Richardson.



In an American Home

The lower hall in a New Jersey manor house, James Bright, architect, is shown at the right. The principal feature of this room is the faithful reproduction of the main stairway in Blickling Hall, one of the notable examples shown in J. Alfred Gotch's "Architecture of the Renaissance in England."

EDITORIAL COMMENT ON ARCHITECTURE & THE TIMES

THE cost of construction is one of the matters uppermost in the minds of men who are identified in any way with the building industry. Does the present cost of construction permit building at this time without danger of loss in the near future? How soon, if at all, will the level of prices for building materials and the labor involved in construction work become much lower? When will these prices drop to the pre-war level, if ever? Upon the answers to these questions and to certain questions relating to the financing of building operations, depends the decision in most instances as to whether building shall be undertaken at this time or deferred.

It seems that a review of the circumstances that lead up to the present situation and an examination of the conditions in the real estate market relative to the value of land and the demand for properties to rent should reveal a sound basis upon which to form a judgment in this matter.

The controlling factor in bringing about the present condition, of course, was the diversion to war production of approximately one-third of the country's industrial capacity during the war, and the financial changes that were coincident. The building industry, in common with other industries that were not essential or were only in part essential, was affected.

Government contracts were awarded on a basis which permitted contractors to compete successfully with non-war industries for materials and labor. A measure that was necessary to the successful prosecution of the war.

The conservation of the materials, labor and credit in those industries that were not vital to the task in hand was also necessary and a radical curtailment of the building industry took place. Eventually the production of sixteen building material was cut down from 25 per cent. to 60 per cent. Non-war construction was greatly restricted until it was almost completely stopped from September 3, 1918, until the armistice was signed.

At the close of the war, however, the index number of building material, not including steel, had risen only 61 per cent. over the pre-war prices of 1913, while the index number for commodities exclusive of building materials had risen 113 per cent. The average increase in wages in the construction industry in forty-one leading cities 1914-1918 was only 28.5 per cent., as against a rise of 94 per cent. in commodities, according to a statement by the United States Department of Labor. When the armistice came there was a large volume of deferred construction projects representing largely the curtailment of non-war production. In order to minimize unemployment during the succeeding period of economic re-adjustment the Government promptly removed the restrictions which it had imposed upon the construction industry.

There is, however, a restriction that cannot be removed—the moral obligation of the financial community to conserve credit until the Victory Loan is floated. Each financial institution must estimate how large an allotment of the Victory Bonds it can sell promptly before it can determine how much of its funds it can set aside for real estate loans and other purposes. It is encouraging to the construction industry to note the tone of optimism of the leading banks based on the data compiled for them by trained investigators. The favorable attitude of bankers toward real estate is indicated by the fact that in the Borough of Manhattan, New York City, mortgages aggregating $8,500,000 in value were renewed in January of this year as against $2,800,000 in January of last year.

In one hundred fifty-two cities 13,500 building permits were issued this January as against 9,600 a year ago. The permits issued in January, 1919, seemed to have been largely for the construction of extensions, for structural repairs and for the construction of inexpensive buildings, particularly housing—the type of activity which usually marks the beginning of a period of a revival of the building industry.

The principal deterrent to building activity at present is the high cost of construction, but as a matter of fact this cost today is low compared with that of food, clothing and commodities in general, which were affected by special war conditions. Wages and prices in the construction industry, in general, were advanced only slightly by temporary war conditions—they have been fixed at their present level mainly by conditions that cannot change to any great degree for years to come—by the tremendous expansion of money and credit. It appears certain that the cost of construction will not come down to such an extent as to endanger a wise investment made now in a new building.

During the early part of the war many people got along with less space than their normal standard of living required, owing to the rapid advance in commodity prices, but by the end of 1918 these influences had spent their force and in only four cities out of ninety-one cities where conditions were inquired into, was the housing demand below normal, while in fifty-two cities rents had advanced 10 per cent. or more and in some instances 40 per cent. or 50 per cent.

At the same time the market value of house sites had declined in six cities and remained practically stationary in seventy-two cities because dealing in real estate was discouraged as a non-war activity requiring the use of credit. It seems certain that in our growing American cities the market value of land must advance sharply.



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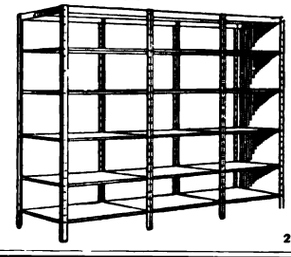
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April 1919



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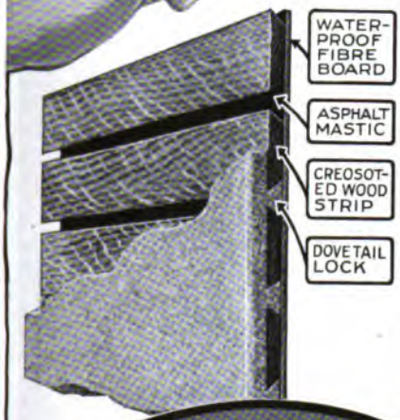
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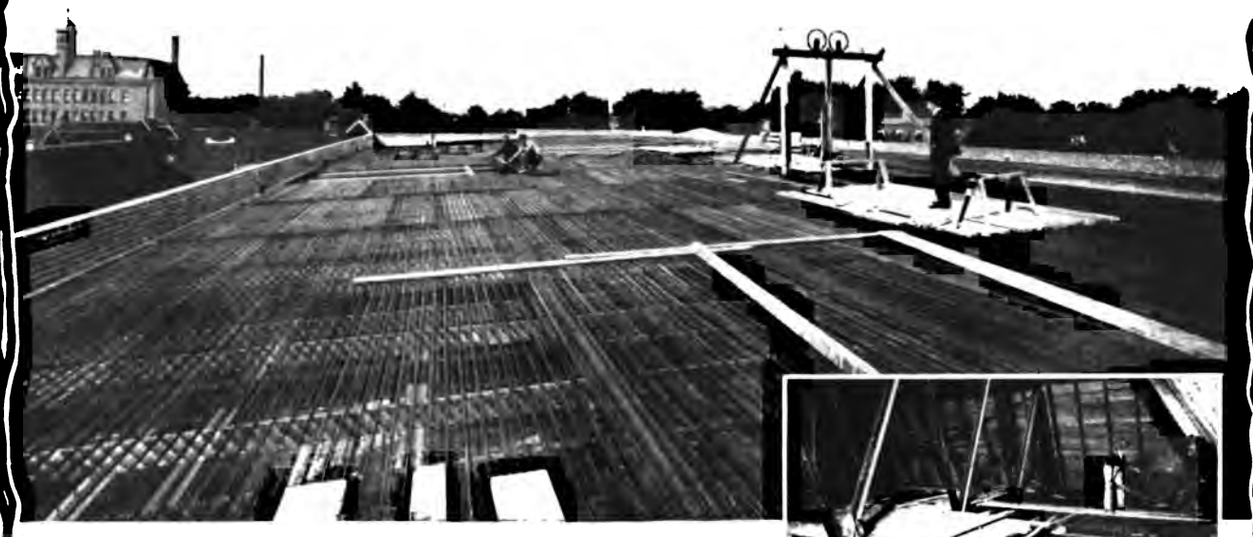
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VOL. VIII, No. 4 April, 1919

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Contributing Editors

C. HOWARD WALKER J. H. PHILLIPS J. F. MUSSELMAN

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THE buildings of the Hebrew Sheltering Guardian Society at Pleasantville, N. Y., which are made the subject of the opening article in this issue, are described in detail, for they constitute an interesting study of the cottage plan of caring for orphans. The manner in which the work for these children is conducted, and the vocational training given are gone into at some length in this article, because these things must be taken into account by the architect in planning and equipping buildings of this character.

A house that is interesting, not only because of its attractiveness but because it presents an unusual and interesting solution of the problem presented by the site upon which it was built, is the residence of D. M. Ferry, Esq., at Grosse Pointe, Michigan. It is fully described and illustrated.

A hotel that bears evidence of thorough study from every angle of the problem is The Broadmoor Hotel, Colorado Springs, which is thoroughly covered by the description and is shown by photographs, both exterior and interior, and by plans. The exterior has been so designed that it harmonizes with the country. The building has been given a proper setting of landscape gardening which is shown by a plan. The comfort and convenience of the guests, economy and efficiency in operation and the interior treatment have been given due consideration by the architects.

A city house so planned that the rooms are unusually well lighted and that the windows command the best views obtainable, is the residence of William Woodward, Esq. The exterior is simple and dignified in treatment. The interior creates an impression of spaciousness that is surprising in a city house.

Another city house described and illustrated in this issue is the residence of Bernard E. Pollak, Esq., New York. This house is an interesting study in remodelling, showing interiors completely transformed. This house was the home of the late Paul Leicester Ford, author of "The Honorable Peter Stirling."

"The New San Francisco, Part II, Business Buildings," by Mr. William Winthrop Kent, appears in this issue. In this article are illustrated and described a number of the recent buildings that show the progressiveness of San Francisco.

In the review of interiors, Mr. J. H. Phillips takes as his subject, "Old American Interiors" and treats of the quaint and delightful type of old-time homes. He traces their origin to the English cottage type, points out the characteristics that make these old interiors with their simple furniture and fitments so much admired today and shows how these old examples are inspiring some of the best work of architects and decorators of the present time.

The article by Mr. J. F. Musselman under the general head "Equipment" has as its subject, "Elevator Studies." Mr. Musselman gives in this article an outline of the main factors influencing the placing, number, capacity and type of elevators required for buildings of different kinds, giving particular attention to apartment house and office building requirements. He also points out the chief characteristics of different types of elevator machines and their bearing upon the suitability for different classes of work.

Among the plate illustrations are views of the residence of Frank D. Potter, Esq., at Rye, N. Y., and the residence of Willard E. Day, Esq., at White Plains, N. Y., both interesting country houses.

IN THE MAY ISSUE

THE next issue of the ARCHITECTURAL REVIEW *will contain a description and illustrations showing an unusual city house, a business building that is out of the ordinary both as to exterior and plan, and a notable memorial.*

"The Story of American Architecture in the Philippines, Part II," by Mr. Ralph Harrington Doane, will be the opening article.

"The Review of Recent Architectural Magazines" will be resumed in this issue under Mr. C. Howard Walker. In this department architectural work illustrated and described in the current magazines and articles of interest to the profession will be reviewed, as in the past.

The third and concluding article of the series on the "New San Francisco" by Mr. William Winthrop Kent will appear in this issue and will be devoted to churches and clubs.

Mr. J. H. Phillips in his "Review of Interiors" will treat further of early American interiors. His article will contain a number of photographs of rooms that are remarkable for their quaint attractiveness. It will also show present day interiors that embody the spirit of the old work.

Mr. J. F. Musselman will contribute another of his articles on "Equipment," taking up another phase of the matter in a brief and practical manner.



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THOMAS HASTINGS, ARCHITECT

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Number 4

A COTTAGE HOME FOR ORPHANS

THE COMMUNITY OF THE HEBREW SHELTERING GUARDIAN SOCIETY AT PLEASANTVILLE, N. Y.

WITH the idea of giving the children under their care the closest possible approximation to the living conditions that obtain in a home, the Hebrew Sheltering Guardian Society adopted the cottage plan for housing the orphans cared for by them at Pleasantville, New York. The architect was Harry Allan Jacobs, with whom M. G. Heidelberg was associated in this work.

The cottages have been given the appearance of family homes and the general impression produced is very pleasing and in accord with the wish of the society to get away from the institutional idea.

The general scheme comprises about thirty detached buildings, well separated by lawns. The central feature of the plan is the group of buildings composed of the administration building and the trade schools, which are placed at either side of it and connected with the central building by colonnades. One of these schools is for boys and the other for girls.

In front of this group is an open square upon which four cottages face. These cottages occupy corner lots and they have been planned to fit the location. They are, therefore, different from the typical cottages of the community.

All the other cottages are built from a single typical plan carefully worked out to provide the required accommodations for the number of children to be assigned to a cottage and with a view to the most effective supervision by the matron in charge. Each cottage is planned to accommodate comfortably twenty-eight children, a matron and a teacher.

It will be noted that the teacher's room is placed on the first floor adjoining the entrance vestibule where her door commands a view of the stairway, of the dining room and the sitting room, as well as of the entrance.

The matron's room is on the second floor, at the front, commanding a view of the hall and of the entrances to the dormitories at either side. The teacher's room has a toilet adjoining and there is a private bathroom adjoining the matron's room.

The dormitories are well lighted and airy, hav-



The Administration Building and Trade Schools

ing windows on three sides. Under each window or group of windows is placed a radiator. There is ample space between the beds. The toilet room for the children has complete equipment, including three shower baths. It has a tile floor and the walls are finished with Keene's cement to a height of six feet. The cottages have separate hot water heating plants. They are of frame and stucco construction with shingle roofs and are very homelike and attractive in appearance.

The living room is large, light and well ventilated. It contains large tables around which the children gather to study, read and play games. Each living room has a large game closet and a well selected library. The books are exchanged among the cottages so that there is always a fresh supply of reading matter.

In the dining room there are small tables for the children which help to give a homelike air and as employees eat at tables in the same room the impression of a family group is strengthened.

The cooking is done by the older girls who are students in the classes in domestic science and the cottages are kept in order by the students. Each week an honor flag is awarded to the cottage that has been kept in the best order during the preceding week. This flag is hung in front of the cottage until some other cottage wins it. In these ways and in many other ways the sense of belonging to a friendly group is created and maintained in the children. This it would seem is much more desirable than the feeling that he is only one of hundreds, that must have taken possession of many a child housed in the old fashioned orphan asylum.

Besides the general offices, the administration building contains classrooms and assembly rooms for the schools and there is a large hall on the second floor which is used for religious services.

This building and the trade schools are of terra cotta block construction finished with stucco and have tile roofs.

The entrance door is framed in faience ornament in the colors characteristic of Della Robbia ware and there are panels of the same material over the windows of the trade schools.

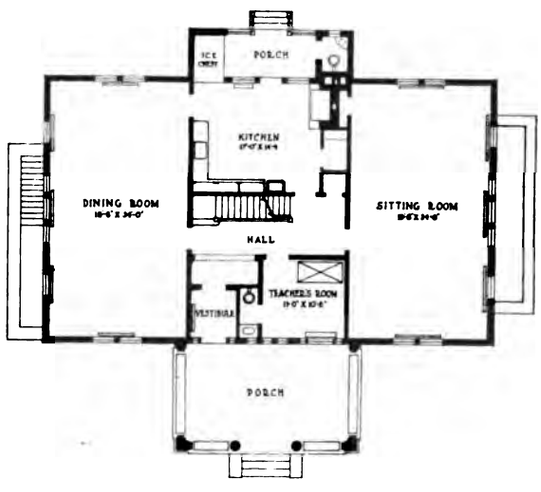
Back of the administration building, and at some distance, are the power-house, the store-house and the laundry, all constructed of field stone. The power-house supplies steam for heating the administration building and the trade schools, also electric current for lighting all the buildings, including the cottages.

In a group at one side of the grounds are the hospital, the isolation cottage in which newcomers are quarantined before being admitted to the cottage community, also the hospital for contagious diseases.

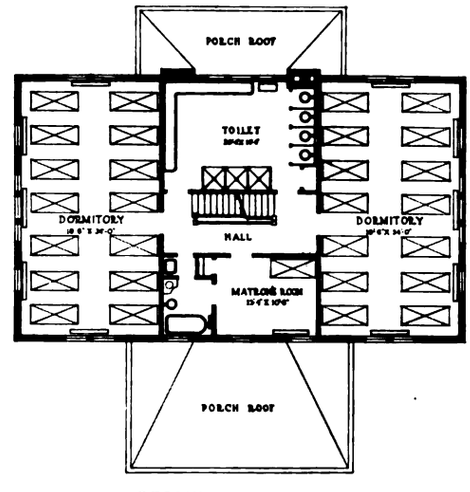
The quarantine against the introduction of contagious diseases is conducted with unusual thoroughness for newcomers are admitted only in groups—the whole group having been held in quarantine the required length of time.

This seems the only logical way of conducting such a quarantine for where children are admitted constantly from outside to the isolation cottage, some of them may infect children whose period of detention has almost expired and who will carry the infection to the members of the group in the cottage to which they are assigned. Once started in this way a contagious disease might spread throughout the community.

The hospital is well equipped and contains a dental clinic, in which the teeth of the children



FIRST FLOOR PLAN



SECOND FLOOR PLAN

Floor Plans of Typical Cottage

are given constant and careful attention. There is in the hospital building a general clinic in which even the slightest injuries and illnesses of the children receive prompt attention.

The hospital is used mainly for bringing up to the standard children who are found upon admission to be below normal in health, under-nourished and so forth. Here they are given special care and special diet planned to meet their needs.



Detail of Entrance

The trade schools are well equipped. The school for boys has machinery and tools necessary to the proper teaching of many vocations. The boys are taught carpentry, blacksmithing, machine work, electrical work, bookkeeping, typewriting, stenography, printing and book binding. The school has a job printing office.

In the school for girls the subjects taught include plain sewing, dressmaking, millinery, costume design, bookkeeping, typewriting and stenography.

At the age of thirteen or fourteen the children are asked to make a choice of the kind of work that they believe they will prefer to follow through life and they are allowed to specialize in that subject from that time on. During the first two or three months of this special training their progress is carefully watched and their aptitude for this vocation is judged. If, at the end of this period it appears that they have not made a wise choice they are urged to choose some other line of work and are given assistance in their effort to choose the kind of work for which they are best fitted by their natural qualities.

Domestic science is given special attention in the girls' school. The girls are instructed by a dietician, under whose direction they select the materials at the store-house and prepare the food in the classes in cookery. The other branches of the subject are gone into with equal thoroughness.

It is said that the courses in vocational training have been particularly successful and that a very high percentage of the children who have had the advantage of this training have gone out and secured positions in the line for which they have been trained in this school and have been successful.

That the vocational training is not allowed to retard the pupils' progress in general educational subjects is indicated by the report that children from these schools have been admitted to high



One of the Trade Schools



Typical Square Cottage

school at the age at which children usually enter that grade.

The school accommodates about six hundred children, ranging in age from six to sixteen years, approximately.

This community is an interesting example of the working out of the cottage plan for caring for orphans, and the strongest feature of this plan, namely the creation of a home atmosphere, has been well expressed in the design of the cottages.

It seems that a child must be much happier living as a member of a friendly group, such as is found in each of the cottages of a community of this type than where he is cared for in an institution organized on the congregate plan.

In an effort to combine the advantages of the congregate plan on the one hand and the cottage plan on the other, institutions are being developed on the pavilion plan, in which groups of children somewhat larger than those assembled in any one unit under the cottage plan are handled and in which the general scheme resembles the congregate plan in a number of ways.

Whatever may be the relative merits of these plans, the community at Pleasantville surely affords an interesting study of the working out of the cottage plan under what seem to be unusually favorable conditions.

Architecturally the community buildings are interesting because they show the adaptation of the features of domestic architecture to the special requirements arising from the necessity for caring for a group of more than a score of children in a house built on the lines of a family residence. This has been accomplished while the home atmosphere has been retained. This group of buildings is also interesting because the institutional character has been carefully avoided even in the style of the structures of a rather public nature, such as the administration building and the trade schools. There has been no undue effort to make these buildings impressive, there is no excess of architectural features or ornament. They have more the appearance of a public library group than of institutional buildings.



Colonnade Connecting Buildings or Main Group

THE RESIDENCE OF D. M. FERRY, ESQ. AT GROSSE POINTE, MICH.

TROWBRIDGE & ACKERMAN, ARCHITECTS

ON THE shore of Lake St. Claire, that pleasant little body of water tucked in between Lake Huron and Lake Erie, is located the interesting house by Trowbridge & Ackerman for D. M. Ferry, Esq., at Grosse Pointe, Michigan, about ten miles north of Detroit.

This lake was the highway of the French settlers of the region in the early days; across it they brought their supplies, and when they divided the land into farms they made them long and narrow so that each might have a share of the lake front and sufficient area for cultivation. No doubt there was another consideration that influenced them to divide the land in this way—the protection they were able to afford one another against marauding Indians by having their homes close together, as they naturally were under this arrangement.



Detail of Entrance

This division has persisted down to the present day and as a result many of the private estates in this section have the shape of the old farms, being narrow on the lake front and running back from the water. The property of Mr. Ferry is one of these and its shape and its relation to the lake were important factors in the architectural problem.

Other determining conditions were the level character of the ground and the fact that it lies but little above the lake.

The approach to the site of the house by way of a long straight road, already existing and admirably bordered by old trees was another factor that had its influence upon the design of the house.

Since the land was almost level with the lake it was necessary to build the whole house above the surface, in order to avoid trouble with groundwater. To have then filled around the house to the required depth would have meant a great deal of grading. But the problem has been solved in a different way, that required only a minimum of grading and that gives the house much of its interesting character and attractiveness.

Though there is practically a full basement story, the house has been given the appearance of standing down on the ground by the clever arrangement of a forecourt, a terrace and a secondary terrace. The comparatively little grading required for these was practically all the filling that was done.

The orientation was determined by the fact that there was no other logical location for the major rooms than facing the lake.

It seemed desirable to make the front of the house towards the lake symmetrical in the main and to treat the portion of the grounds between the house and water in a rather formal manner.

The ground, which is probably at no point more than two or three feet above the level of the lake, sloped gradually into the water. In order that the grounds might be developed effectively, a concrete retaining wall or "sea wall" was built at the edge of the lake and earth dredged out from in front of it was used in bringing the grounds to a level surface between the water and the terraces.

The old road entering the property was retained because of the lane of trees through which it passes. As this road is off the axis of the property, the entrance front of the house was made unsymmetrical.

The plan developed from the decision to make the front toward the lake symmetrical and entrance front unsymmetrical, and the style of the exterior treatment was chosen because it seemed the natural expression of the plan under the circumstances.

The exterior walls are of light grey stucco with limestone trimmings and the roofs are of brown-red tiles that show considerable variation. The roof color is picked up by the brown-red brick pavement of the terraces and walks. The entrance road is also paved with red brick instead of the usual cold grey slag or macadam. The color scheme of the house is highly effective and pleasing in the setting of landscape gardening which was designed and carried out by William Pitkin, Jr., of Cleveland.

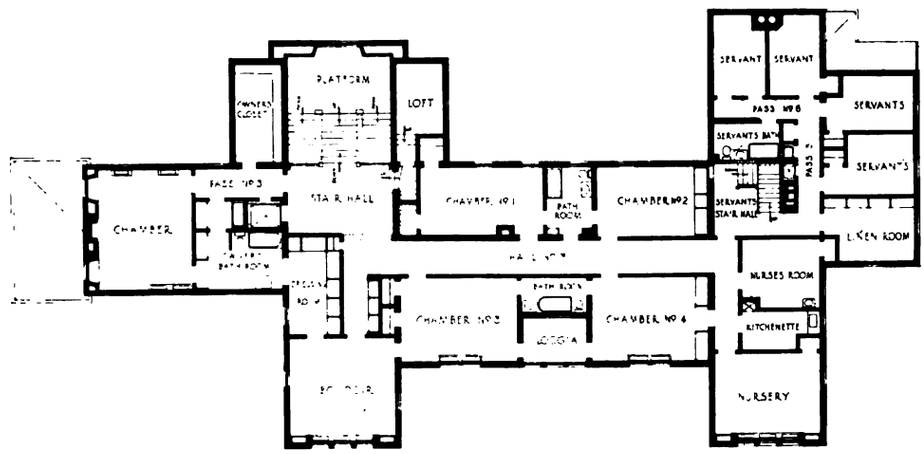
The garage and a service court are in an angle where they are hidden from view by the forecourt and a wing of the house.



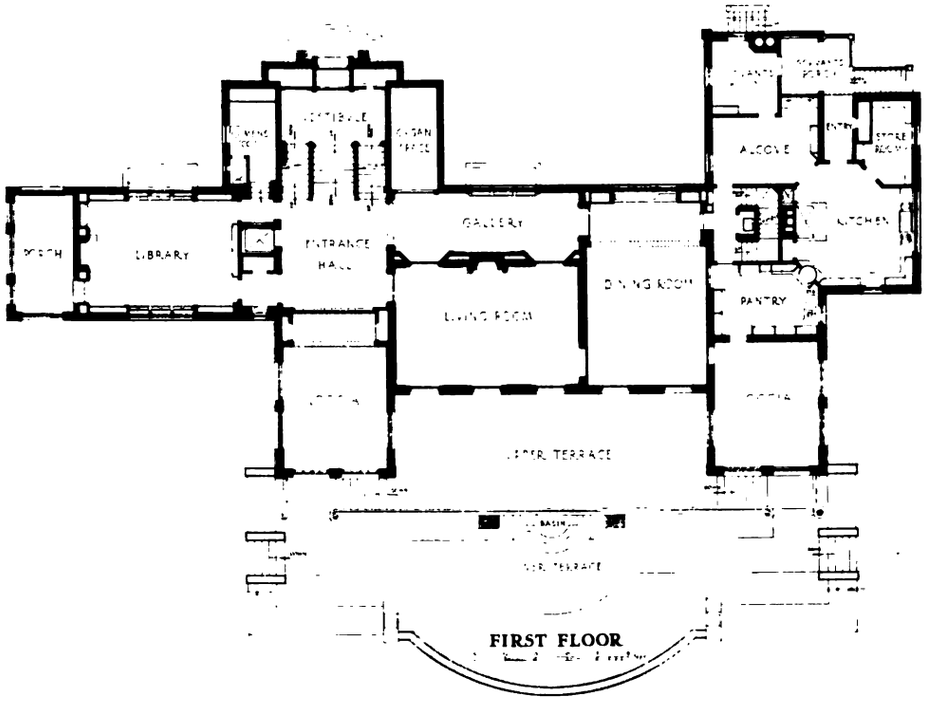
A View from the Garden

Throughout the main floor a quiet tone of brown predominates in the interior treatment. The woodwork in most of the rooms on this floor is of butternut in a grey-brown finish, excepting in the hall and gallery. In the living room the walls are in a quiet tone of light brown and color relief is found in the bright chintz and in the color of the oriental rugs. There is an organ consol in the living room and across the gallery, back of a screen, is the organ.

The loggias are among the attractive features of the house. They are glazed-in and the one connected with the dining room is used as a breakfast room. Under the loggia that adjoins the library is a children's play room, opening on the lawn. The lower terrace is well adapted for use as a stage for amateur theatrical performances, the level lawn in front of it providing a place for seating the audience. This is only one way in which the terraces combine with the landscape gardening to make the house attractive.



·SECOND·FLOOR·



FLOOR PLANS

RESIDENCE OF D. M. FERRY, ESQ., GROSSE POINTE, MICH.

TROWBRIDGE & ACKERMAN, ARCHITECTS

An idea of the effectiveness of these terraces can be obtained from the photograph of the garden front and from the plan of the first floor. It will be seen that the upper terrace opens off of the garden front of the living room and the dining room, adding very greatly to the attractiveness of these rooms. It lies between the loggias, giving an interesting variety to the view from these wings of the house. Its depth is almost entirely enclosed between these wings, giving it a sheltered effect and making it seem very much a part of the house. Short flights of steps lead down from the ends of the upper terrace to the level of the lower terrace, upon which they enter at the ends near the steps that lead down to the lawn.

The central feature of the lower terrace is a fountain, set against the retaining wall of the upper terrace. The iron railing placed at the edge of the upper terrace and following down the steps leading to the lower terrace, fits into the scheme admirably because of its simplicity and lightness of effect.

The supplementary terrace merges into the lawn near its ends and is given a proper amount of emphasis at the center of the low wall which forms the curved front.

The planting of the grounds is of a sufficiently open character to harmonize with the location and to retain the feeling characteristic of it. The scheme of landscape gardening is very pleasant, combining as it does informal planting with a sufficient suggestion of order and formality to tie the house and the grounds together and to provide a proper foreground for the picture formed by the house when seen from the lake. It also provides many attractive views of the house from different points, framing portions of the architecture in trees and shrubbery.

While the garden front of the house is symmetrical in its main features, the portions of the building extending to the right and left are, as will be noted, not alike. They however create a sense of balance which is, perhaps, more satisfactory in this particular instance than would be complete symmetry. This treatment produces a very pleasant degree of informality that contributes to the appearance of friendliness and to a homelike character of the house.



The Garden Front

The adoption of an unsymmetrical treatment for the entrance front, has not only made the main feature of this front correspond with the entrance roadway but has placed this feature very effectively at the end of the vista formed by the lane of fine trees through which the road runs. It has also introduced a pleasing difference between the two fronts of the house, which adds to its interesting character.

The portions of the grounds in front of the main entrance has been treated in such a manner that it gives added attractiveness to the house by its openness and simplicity.

The house is further brought into relation with its surroundings by the loggias with their wide openings that, though glazed, give to these rooms very much of an outdoor character. The use of one of these loggias as a breakfast room seems a particularly happy idea.

THE BROADMOOR HOTEL, COLORADO SPRINGS, COL.

WARREN & WETMORE, ARCHITECTS

STANDING on the rolling ground where the great plains break against the mountain range, the Broadmoor Hotel, at Colorado Springs, Col., occupies an especially well chosen position. From the front of the hotel one can look away many miles towards the east over the level country, while at the west, tower the impressive mountains.

Rising in stepped masses, the outline of the hotel harmonizes with the contour of the mountains, and the style of treatment chosen by the architects, Warren & Wetmore, for the exterior of the building reflects the characteristics of the architecture of northern Italy, where the topography of the country is similar to that of the Pike's Peak region in which this hotel is situated.

The exterior walls in general are finished in stucco that is warmed by a slight flesh tint. Around the main building, just under the eaves, is a band of ornament executed in sgraffito in tones of sepia on a background the color of the stucco.

The roofs are of tiles that show a great deal of variation in coloring, ranging from light grey-green to dark green, the colors blend to produce a soft moss-green.

The basement story of the main building wherever it is exposed above the ground is faced with Turkey Creek stone, a local stone obtained about forty miles from the site of the hotel. It is of a creamy pink tint veined with brown. In texture, it resembles Caen stone.

Entrance is had on the east front through a loggia in the basement story. This loggia has walls of the same stone as the exterior walls of this story and a vaulted ceiling, which is painted blue, spangled with small gold stars, and decorated with narrow bands of painted ornament.

One passes from the loggia into the lobby where the office is found directly opposite the entrance. Here the decorations were inspired by the interior of the Davanzatti Palace. The walls are covered with an allover design painted in polychrome on a dull bronze ground, the whole toned down to an antique effect. The stair railing is of carved wood in polychrome and dull gold. The ceiling beams have painted ornament in the Italian Renaissance manner framing small painted scenes from the surrounding country.

Besides the lobby and the office of the hotel, this floor contains the brokers' office, barber shop,



The Broadmoor Hotel, from a drawing by Birch Burdette Long



VIEW OF HOTEL FROM THE SOUTH



THE LAKE PLAZA FROM THE ENCLOSED TERRACE

THE BROADMOOR HOTEL, COLORADO SPRINGS, COL.

WARREN & WETMORE, ARCHITECTS



Detail of Entrance

cigar counter, shops, a Turkish bath and all other features of the hotel that are of a business character. The Turkish bath is a double installation, for a complete establishment is maintained for women and another for men, so that the baths are available to all guests at all hours.

Since, as has been noted, all business is confined to the ground floor, upon which the principal entrance opens, the main floor above is left free for use exclusively as a living floor—for the social life of the hotel. This also is a ground floor for the slope of the ground from one side of the building to the other brings this floor level with the ground on the west front, which overlooks the lake.

This lake, originally intended for irrigation purposes, has become the main feature of a very attractive piece of landscape gardening, to which the rolling character of the ground around the hotel has lent itself very well. The lake is filled with clear mountain water and has been stocked with trout. A small island in the lake has been treated as a Japanese garden and represents a complete landscape in miniature. It is reached by a foot bridge.

Though trees are rarely found in a location such as this, there are a number here which add materially to the attractiveness of the grounds. Their presence is due to the fact that some thirty years or more ago a casino was built here and the grounds were improved to some extent. These trees were planted at that time.

Sometime after the casino was built a small hotel was erected on a site which is within the property of the present hotel, and the grounds were laid out on a simple plan, with a drive in the center. When the building of the Broadmoor Hotel was undertaken the grounds were laid out on an entirely new plan, which however was made to include all the desirable features already in existence, namely the lake and the fine old trees, which were incorporated in the new plan of the grounds made by the landscape architects, Olmsted Brothers. A plan of the grounds is shown on one of the plate pages of this issue.

The terrace on the lake front of the building is covered with awnings in summer and screened by lattice; here the guests may dine out of doors.

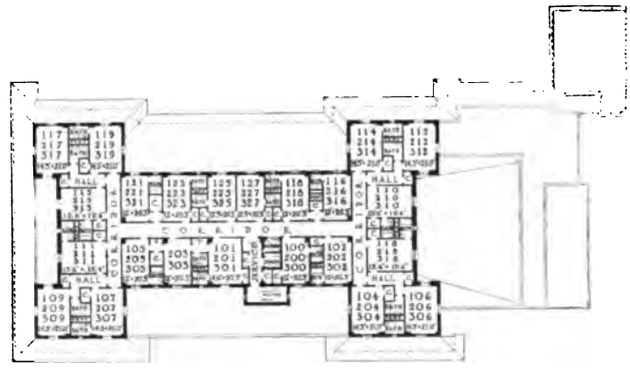
The rooms on the main floor are decorated in an interesting manner. In the lounge is a large stone fireplace and the walls have been very cleverly painted with ornamental motifs and figure designs to simulate relief plaster work.

In the writing room the ceiling is of wood, ornamented in polychrome and gold, the mantel has a Sienna marble facing, and the woodwork is of Philippine mahogany.

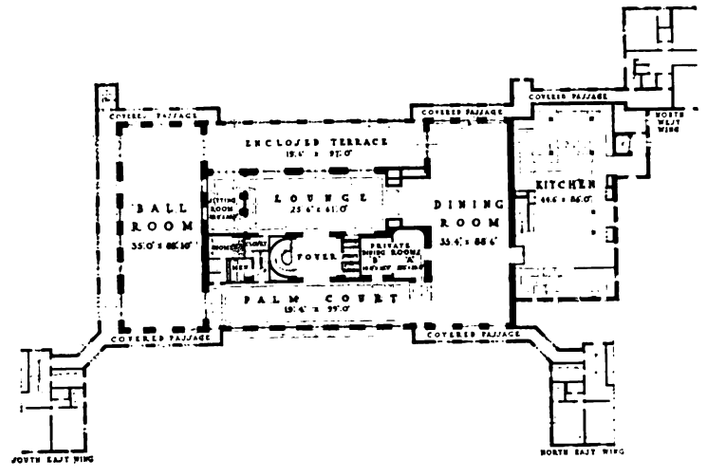
The ballroom has pilasters and entablature of



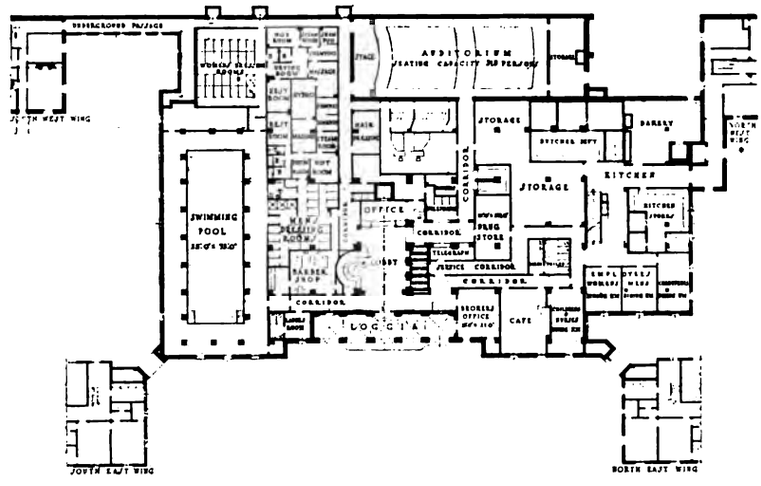
Detail of Loggia



Plan, First to Third Floor, Main Building



Plan of the Main Floor



Plan of Ground Floor



THE OFFICE



WRITING ROOM

THE BROADMOOR HOTEL, COLORADO SPRINGS, COL.

WARREN & WETMORE, ARCHITECTS

marble, and the ceiling is decorated with small figure groups in low relief.

In the palm court the walls have painted decorations in the Pompeian manner. This room faces the east and is used as a breakfast room in winter.

The enclosed terrace has walls in Caen stone effect and the ceiling is covered with a lattice that is painted in several slightly different shades of green to produce color variation. The window draperies and the Italian silk blinds are of ecru color. The floor is of light green cement with brown tile inserts.

Covered passages surround the rooms on the main floor and protect them from the heat in summer. These passages also give access to the wings.

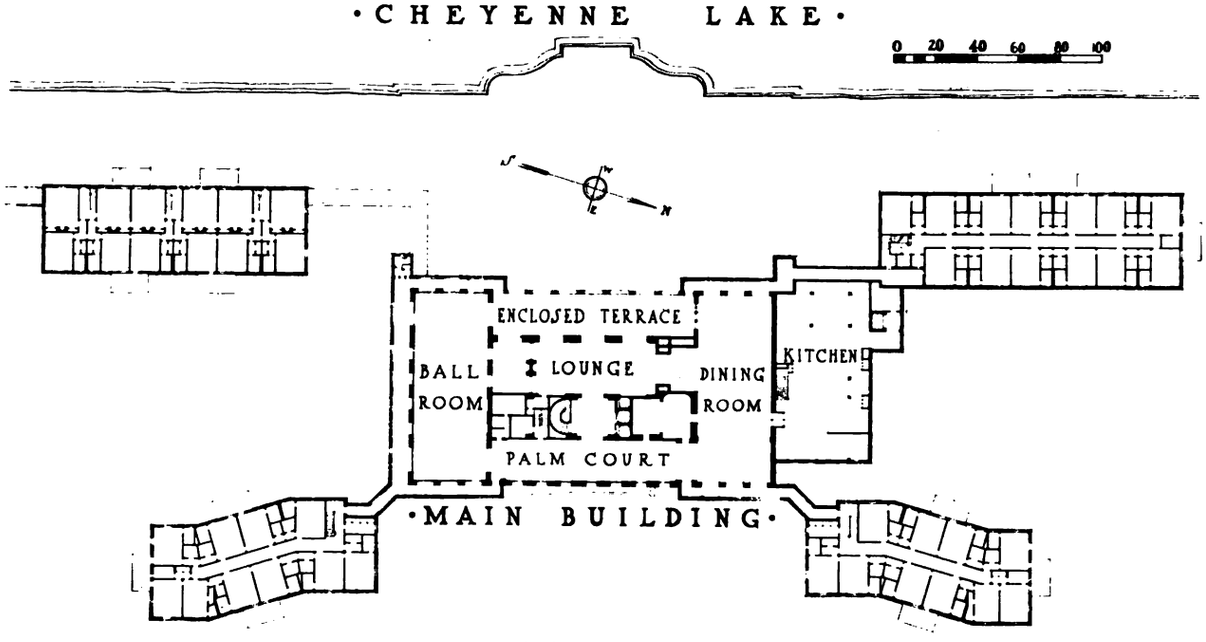
The bedroom floor plans are remarkable for the high percentage of corner rooms they show. This is one of the results of building the hotel in a series of stepped terraces, which not only produces the outline desired to bring the building into harmony with the surrounding landscape, but also provides an unusually large number of especially desirable bedrooms. Furthermore, this scheme has made it possible to provide most of the corner rooms with gardens placed on the roofs of the portions of the buildings just below. Many of the bedrooms have sleeping-porches—there are about sixty sleeping-porches in all. Since clothes closets much larger than those required in a city hotel are needed in a resort hotel, where the guests must keep a considerable variety of clothes ready at hand, closets of ample size have been provided.

On the top of the hotel is a roof garden that commands a wide view over the plains in one direction and over the lower prominences of the mountainous country in the opposite direction, including a view of the Garden of the Gods.

The hotel consists of the main building and four other buildings, known as "Southlake," "Northlake," "Southmoor," and "Northmoor." All these wings are connected with the central building by underground passages as well as by the covered passages at the level of the main floor, mention of which has already been made. The underground passage extending towards the golf club, owing to the inequality of the ground, comes to the surface at a point not far from that building and provides a convenient means of access to the swimming pool from this direction. This pool, by the way, is one of the interesting features of the hotel for it is twenty-five feet wide and seventy-five feet long and its walls are of ceramic mosaic.

A theatre, with a stage and an auditorium capable of seating more than three hundred people, is included in the hotel.

As the hotel is open throughout the year and the number of guests varies greatly at different times, the plan of building the hotel in five distinct, though connected, structures meets the requirements especially well. At the season when the number of guests is smallest only the central building need be used, then as increasing arrivals make it necessary, one section after another can be opened. This is a decided advantage.



General Plan at the Main Floor



ADMINISTRATION BUILDING

HEBREW SHELTERING GUARDIAN SOCIETY, PLEASANTVILLE, N. Y.

HARRY ALLAN JACOBS, ARCHITECT



ENTRANCE FRONT

HOUSE FOR D. M. FERRY, ESQ., GROSSE POINTE, MICH.

TROWBRIDGE & ACKERMAN, ARCHITECTS



BREAKFAST LOGGIA



LIVING ROOM

HOUSE FOR D. M. FERRY, ESQ., GROSSE POINTE, MICH.

TROWBRIDGE & ACKERMAN, ARCHITECTS



CORRIDOR



LIBRARY

HOUSE FOR D. M. FERRY, ESQ., GROSSE POINTE, MICH.

TROWBRIDGE & ACKERMAN, ARCHITECTS



GARDEN FRONT

HOUSE FOR D. M. FERRY, ESQ., GROSSE POINTE, MICH.

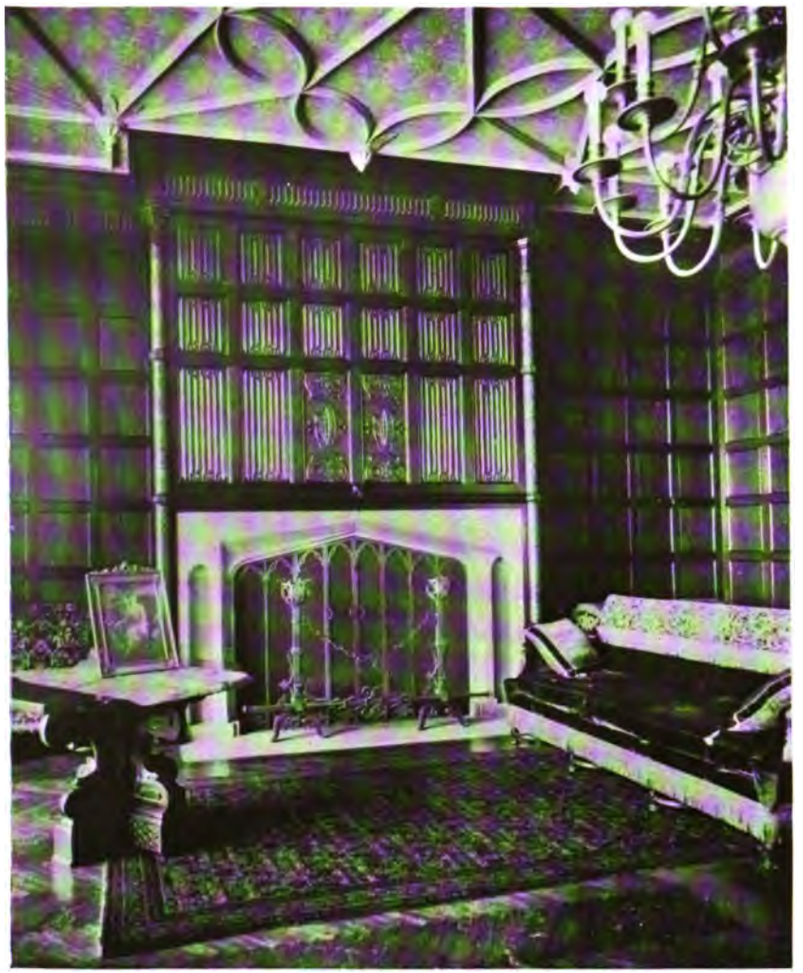
TROWBRIDGE & ACKERMAN, ARCHITECTS



LIVING ROOM

RESIDENCE OF BERNARD E. POLLAK, ESQ., 53 EAST 77TH STREET, NEW YORK

TAYLOR & LEVI, ARCHITECTS



FIREPLACE IN THE LIVING ROOM



FIREPLACE IN THE LIBRARY

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TAYLOR & LEVI, ARCHITECTS



VIEW OF HOTEL FROM CHEYENNE LAKE

THE BROADMOOR HOTEL, COLORADO SPRINGS, COL.

WARREN & WETMORE, ARCHITECTS



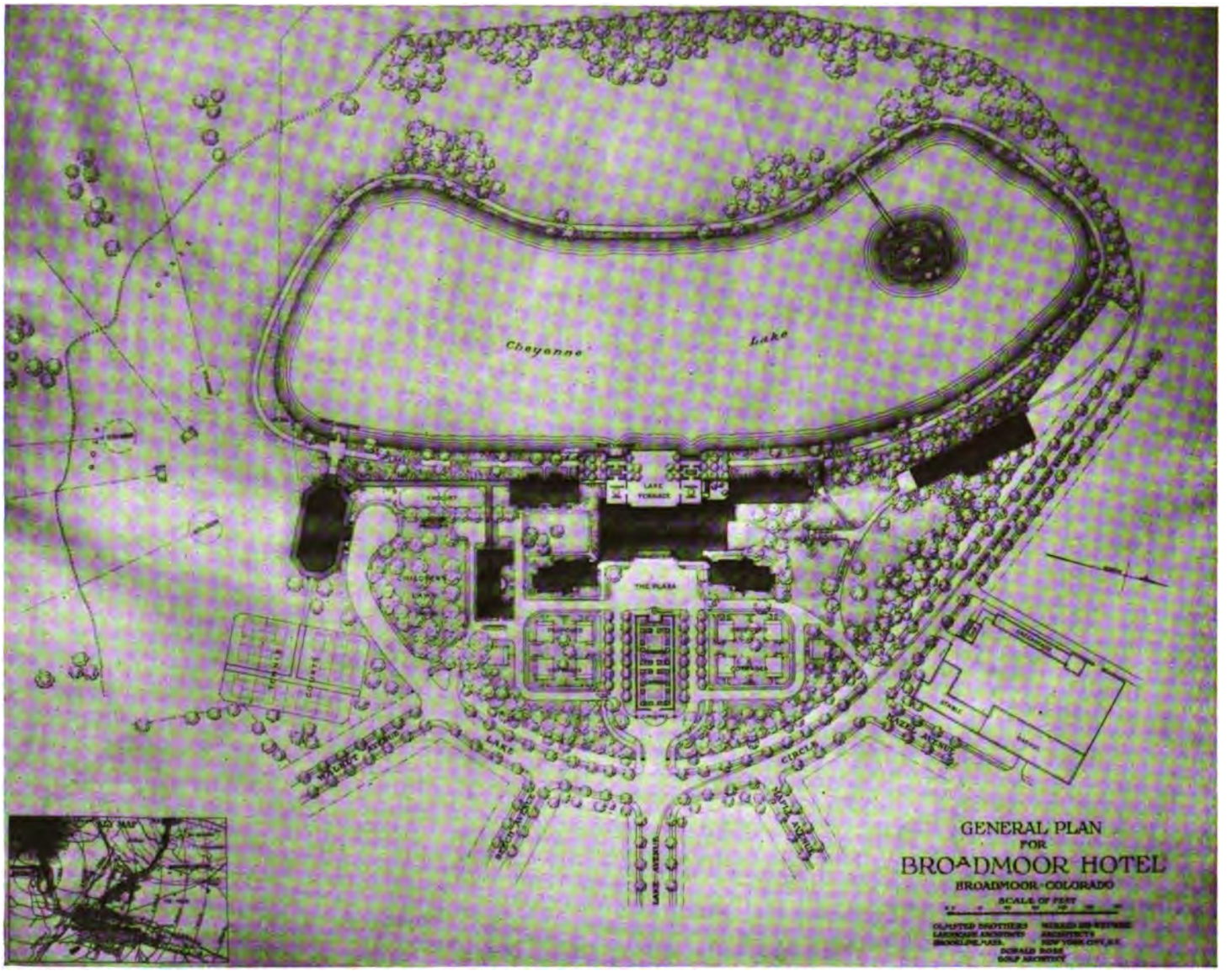
THE ENCLOSED TERRACE



THE LOUNGE

THE BROADMOOR HOTEL, COLORADO SPRINGS, COL.

WARREN & WETMORE, ARCHITECTS



GENERAL PLAN OF GROUNDS AND APPROACHES

BROADMOOR HOTEL, COLORADO SPRINGS, COL.

WARREN & WETMORE, ARCHITECTS



DETAIL OF ENTRANCE

RESIDENCE FOR WILLIAM WOODWARD, ESQ., 9 EAST 86TH STREET, NEW YORK

DELANO & ALDRICH, ARCHITECTS



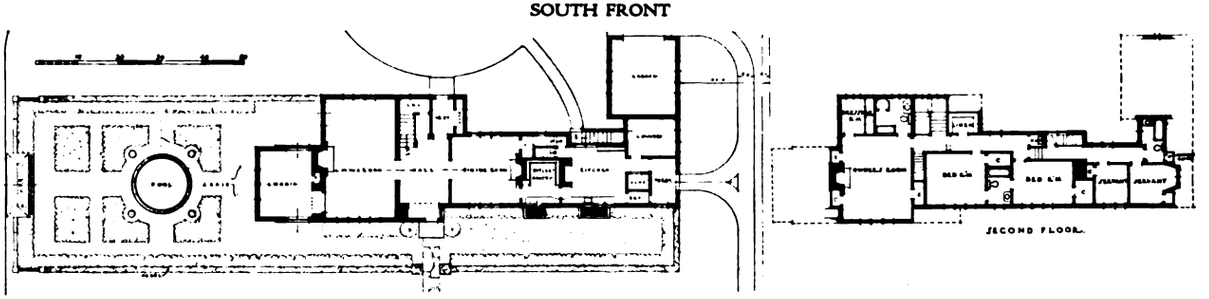
LIBRARY

RESIDENCE FOR WILLIAM WOODWARD, ESQ., 9 EAST 86TH STREET, NEW YORK

DELANO & ALDRICH, ARCHITECTS



SOUTH FRONT



HOUSE FOR FRANK D. POTTER, ESQ., RYE, N. Y.

LEWIS COLT ALBRO, ARCHITECT



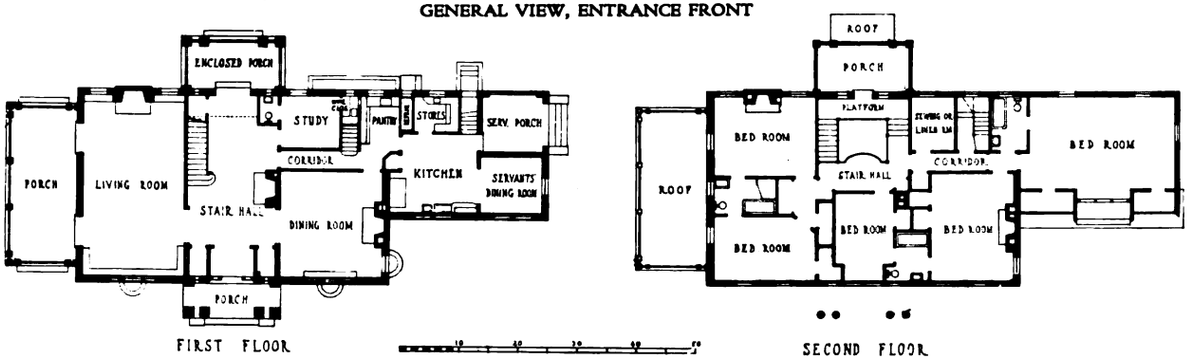
GENERAL VIEW, ENTRANCE FRONT

HOUSE FOR FRANK D. POTTER, ESQ., RYE, N. Y.

LEWIS COLT ALBRO, ARCHITECT



GENERAL VIEW, ENTRANCE FRONT



HOUSE FOR WILLARD E. DAY, ESQ., WHITE PLAINS, N. Y.

KENNETH M. MURCHISON, ARCHITECT



ENTRANCE

HOUSE FOR WILLARD E. DAY, ESQ., WHITE PLAINS, N. Y.

KENNETH M. MURCHISON, ARCHITECT

THE NEW SAN FRANCISCO

PART II. BUSINESS BUILDINGS

By WILLIAM WINTHROP KENT

THE commercial architecture of San Francisco is a surprise to the newcomer, not because it is, as a whole, the best conceivable, but from the remarkable fact that so many buildings of good design and of a substantial character have been built since the fire of 1906.

As one looks up Market Street, one or two tall landmarks of the old city before the fire are recognizable, although now almost lost among the rapidly changing fronts on this and adjoining streets.

Messrs. Bliss and Faville's very successful Southern Pacific Building is the most important recent addition to the big and tall buildings of the near water front. It is built of buff-grey stone and terra cotta, pinkish yellow brick and the inset lintels below the arches and between the columns of the first story and the two upper stories are of Alps green marble, which gives just the needed bit of complementary color to the lower and topmost portions and does not cut in two the window shadows. This and the beautiful Hotel Oakland in Oakland, by this same firm, are two of the best designs on the western coast.



On Market Street





Views on Post Street

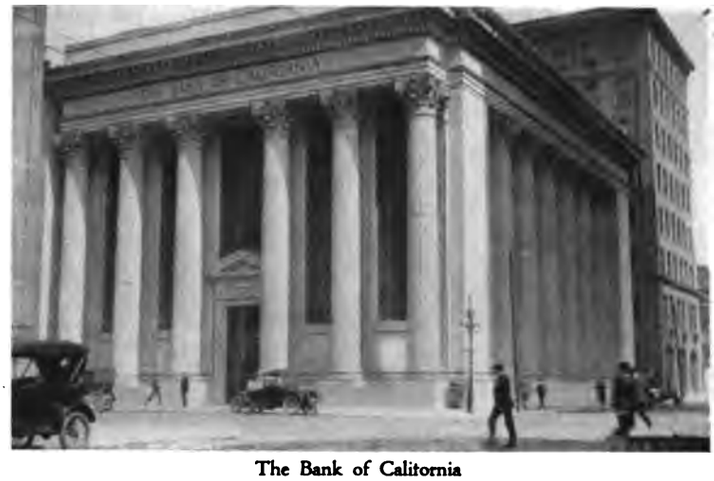
Although generally speaking most of the new commercial work is based on familiar types, yet there is a certain free and fresh treatment evidenced that impresses a stranger at once. Thus the city has escaped the consequences of the tendency to copy—which certainly did exist before the great fire; and in some of the structures which survived the conflagration there can easily be distinguished certain details,—which put in an earlier appearance on Broadway and Fifth Avenue,—but this trait of reminiscence is almost lost in the later work, with its clever and original adaptations of the Renaissance to modern conditions.

If one were to give a concrete instance of this new spirit, certainly the Hotel Clift may be said to embody it, and the Hallidie Building, the new Y. W. C. A. and the Olympic Club, but it is hard to choose among so many examples.

Farther up Market Street the now well-known tower of the Hobart Building, by Messrs. Willis Polk and Company, gives a hint that the future skyline of the city from the bay will become considerably more like that of New York from the East River, and so add to the simi-

larity remarked by Mr. Julian Street in his "Abroad at Home."

In bank buildings the city is quite fortunate, both in the number and the quality of their design. These are largely in a classic or Renaissance vein, and some of the most interesting are the Bank of California, by Messrs. Bliss and Faville; The Savings Union Bank and Trust Company; The Liverpool, London and Globe Building, by the same architects; The Anglo and London-Paris National Bank, by Mr. Albert Pissis; The Fireman's Fund Insurance Co., and The Newhall Building, by Mr. Lewis P. Hobart, and the building of E. H. Rollins & Co., by Messrs. Willis Polk & Company, to which should be added the noteworthy United States Treasury Building by Mr. J. Milton Dyer.



The Bank of California
Bliss & Faville, Architects

In Golden Gate Park, Mr. Mulgardt has just finished a new Memorial Museum, given by Mr. De Young to the city. It makes one wish that some agency would remove the old Museum.

As for hotels, the imposing "Fairmont" by Messrs. Reid Brothers on Nob Hill, the famous "Palace," by Messrs. Trowbridge and Livingston; the pleasing "St. Francis" by Messrs. Bliss and Faville, and the new "Clift," are enough to sustain San Francisco's reputation as a city of good hotels and good restaurants.

The "Clift." by Mr. Applegarth, is beautiful in color, and impressive in its simple treatment. It is a very successful solution of the problem of a tall city structure on a street corner that is not designed as a tower.

There are very many lesser structures which can lay claim to excellence of architecture. San Francisco is certainly rich in good hostelries, and its restaurants are famous too — but hardly for their architecture—outside of those which are housed in the big hotels. The Techau Tavern is attractively done by Messrs. Cunningham and Politeo.



On California Street

The Custom House, by Messrs. Eames and Young, is a satisfactory and substantial public building, which seems well planned and simply detailed in a French vein. The Post·Office, in Italian Renaissance, is too well known to need mention here; but its plan, lighting, convenience and detail are striking instances of what the system of competitive design in public buildings can secure for citizens, as compared with the old creations—no not "creations" but "duplications."

There is about "down-town" San Francisco a mingling of qualities of New York, Boston, and Chicago; so the easterner feels comparatively at home, after an hour or so. Probably the color and design of the average block has as much to do with this as anything, for the building materials here are much the same as in the eastern part of the country, although the choice is more limited. Indiana limestone, tapestry brick and various other well



The Anglo and London-Paris National Bank
Alfred Pissis, Architect

known kinds of brick and stone are recognizable, as well as that, to the writer, rather disagreeably colored stone which has a way of turning a dark olive color. It is a fact, and a very interesting one to the writer, that green stone of any degree or shade is seldom agreeable to the eye on the exterior of a building—unless possibly when used in mosaic, or in some of the oriental buildings where its complementary color occurs. Certainly, the usual attempt to use serpentine or olive green or green-grey stone in city structures is distinctly unsuccessful as far as the writer has been able to judge. It may be that the growing knowledge of the proper use of exterior color in modern architecture may some day result in giving us a delightful surprise in the use of green, either in terra cotta or stone. But it seems a dangerous hue at present to handle although, as we know from nature, it is one of the best of colors and restful to the eye in a landscape. Let us hope we may some day see green successfully employed, for many are growing color weary from dirty yellow and chocolate brown—and even certain red brick, disguise it as we may with stone quoins and string courses. The French have beaten us here, as in many other matters of taste, in that they use more quiet tones in city building materials than we do. If we or the French could use brick as the Italians of the middle ages instinctively employed it, usually with excellent terra cotta, all would be well with our brick-built commercial streets—and perhaps we shall arrive at this some day. Certainly, the texture of some modern brick has helped us to tone down the rawness of our brick facades, but we still have, it seems, to learn simplicity, and first to unlearn the complicated way in which we are prone to employ the burnt clay products of our day.



The Fireman's Fund Insurance Co.
Lewis P. Hobart, Architect



Newhall Building
Lewis P. Hobart, Architect



Savings Union Bank & Trust Co.
Bliss & Faville, Architects

That California architects and especially those of San Francisco may be among the first to use brick and terra cotta in an entirely new way, or at any rate, in a way which, though not copying, is inspired by the best Italian examples, is not too sanguine a hope.

Certainly where so much lovely color exists as in California, its influence is considerable and further, we already see in several of the new churches of that city certain beautiful color compositions which will be further described later on.

Here it may be said, however, that while the promise of better things to come is evident and unmistakable in these ecclesiastical examples, so far there is in domestic and commercial architecture no very wide or conspicuous use of colored, glazed terra cotta, or of modern brick, just at the present time observable in San Francisco.

This will come surely, as it is coming also in the east, when the average architect sees its great possibilities in the hands of the talented members of the profession, for the average designer follows the sure lead of the more gifted men in architecture as well as in all other matters.

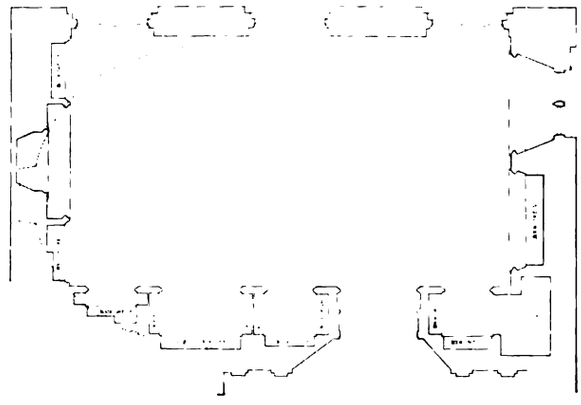
THE RESIDENCE OF BERNARD E. POLLAK, ESQ. NEW YORK

TAYLOR & LEVI, ARCHITECTS

AN UNUSUALLY interesting character has been given to the residence of Bernard E. Pollak at 53 East 77th Street, New York, by the architects, Taylor & Levi, in the course of the work of remodelling this building which was the home of the late Paul Leicester Ford, the novelist, perhaps best known by his book "The Honorable Peter Stirling."

Before the work of remodelling was begun, the library was eliptical in plan, panelled and painted white. The original form is indicated by the dotted line on the plan printed on this page. This panelling was completely removed leaving a rectangular room.

Since an unusually great distance was found between the tops of the windows and the ceiling and it was not desired to change the facade by making higher windows, a ceiling sloping down to the tops of the windows was designed. This treatment was inspired by the ceiling of the "long gallery" at Parham Park, Sussex, which dates from 1697. It is of hand-modelled plaster, the plain surfaces are of rough texture, and the whole is toned down to an antique effect.



Plan of Library

A service stairway that cuts into the corner of the room at the left of the fireplace caused the adoption of the arrangement of the book shelves and book alcoves. Some of the details about the fireplace were inspired by the panelling in Strangers' Hall, Norwich. The treatment of the mantel in the living room was suggested by one at Hollingbourne, Kent. The leaded windows in the living room are of English antique glass and the figure motifs are of lead. The woodwork in both rooms is of walnut carved by I. Kirchmayer.



The Library

The room under the front of the house that was used by Paul Leicester Ford as a garage has been made into a children's entrance and fitted up with closets for toys and so forth; from it the second floor is reached by a separate stairway or by the elevator without entering the main hall.

THE RESIDENCE OF WILLIAM WOODWARD, ESQ. NEW YORK CITY

DELANO & ALDRICH, ARCHITECTS

A CITY house that is unusually livable and has an air of spaciousness and dignity, is the residence of William Woodward, Esq., at 9 East 86th Street, New York, of which Delano & Aldrich are the architects.

The entrance is placed at one side of the front in a portion of the building which is outside of the main lines of the plan and does not rise above the first story. This arrangement has made it possible, among other things, to provide windows on two sides of the library, which is at the front on the second floor, and to provide a window looking out upon the street from the study. The fact that there are windows on both sides of the library makes this room unusually light and airy, for a room in any but a corner house in the city. There is an additional advantage derived from this placing, for the windows of this room that open above the entrance portion command a view of Central Park.

The roof of the entrance vestibule has been treated as a terrace at the level of the second floor. The height of this terrace above the street gives it a certain degree of privacy, and it provides a very pleasant place to sit out of doors that is easily accessible from the second floor. It adjoins two of the rooms which are naturally most used, the library and the study.

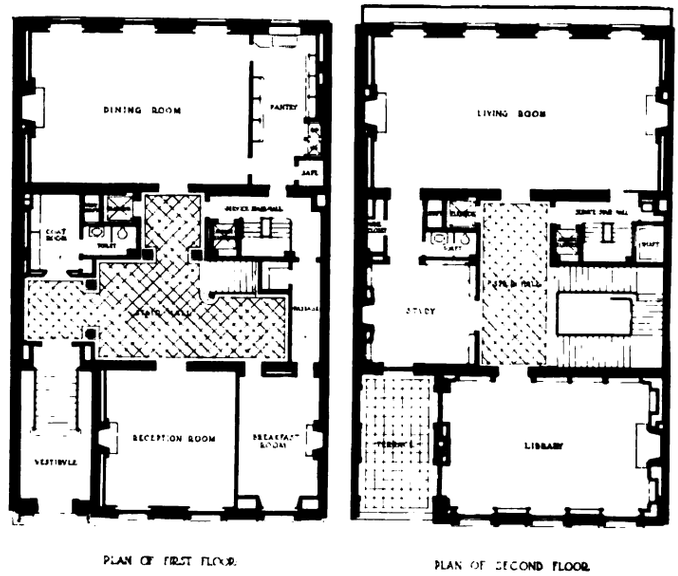
The floor of the entrance vestibule is practically at the street level. A flight of stairs in the vestibule carries one to the first floor where one enters the stair hall which is unusually large and has a high ceiling. It gives an impression of space that is surprising in a city house and it has been treated in a manner in which simplicity and dignity are combined with admirable results.

The staircase is of buff marble and it has an iron rail. Columns of black marble form effective architectural features, contrasting with the plain grey of the walls. The door trim is painted grey like the walls and there is a cornice in the same color. The doors are of walnut. The floor is paved with alternating squares of black and buff marble.

The large living room at the rear on the second floor overlooks a beautiful garden on the adjoining property which extends through to 87th Street.

The breakfast room at the front of the house on the first floor is a pleasant feature. It is connected with the pantry by a direct passage. The coat room is conveniently placed, just opposite the top of the vestibule stairs where it is reached before one enters the main stair hall. The two elevators, one for the owner and the other for service, are placed in the center of the house, at either side of the passage from the main hall to the dining room.

The library and study have dark wood panelling, while the walls of the other principal rooms have ornament in plaster and are painted. The walls of these rooms differ in color, but all are in light pleasant shades. The doors throughout are of walnut. There is a stone mantel in the library and the other main rooms have fine old mantels differing in character of design and coloring, in harmony with the room treatment.



PLAN OF FIRST FLOOR PLAN OF SECOND FLOOR

Floor Plans

The exterior is of Indiana limestone and Hautville marble. There are handwrought iron railings at some of the windows. The mansard roof is of rough green slate that gives it an interesting texture as well as a pleasing color. At the top of the house is a loggia, open at two sides, that commands a view of the Park.

The frontage of the site is about fifty feet; the house dignified in effect.



GENERAL VIEW OF EXTERIOR

RESIDENCE OF WILLIAM WOODWARD, ESQ., 9 EAST 86TH STREET, NEW YORK

DELANO & ALDRICH, ARCHITECTS

THE REVIEW OF INTERIORS

Department Edited by J. H. Phillips.



EARLY AMERICAN INTERIORS

THE simple cottage interiors of the type so familiar in New England and Long Island, many of them of historic interest and landmarks of Revolutionary days, have the human touch and personality that give us the first true expression in American interiors.

Their prototype is found in Anne Hathaway's cottage, so closely associated with the romance of Shakespeare's life. The only difference between the English interiors and the early American interiors is in the materials used. The English built their walls of stone or brick, plastered. The early settlers in this country used wood for their partitions and exterior walls in most of the houses, especially in the country, for it was the most available material. As the wood was worked by hand



Interior of Anne Hathaway's Cottage



The Kitchen, John Hancock House, Lexington, Mass.

it is perfectly natural that the machine-cut quality we find so monotonous was, fortunately, not then possible.

A second glance at a simple English cottage interior will convince one that a pleasing and livable interior of this type cannot be produced without the proper furnishings, which proves that the early hand-made furniture played a most important part in the domestic environment of the times and that interiors inspired by these old rooms must be furnished in a manner true to the spirit of the old times if their charm is to be perpetuated.

Our ancestors from England and Holland who came to America in the early days brought with them what little furniture they could. As soon as the colonists became permanently settled in this country and were in a position to satisfy their tastes, they imported from England not only furniture but in many instances mantels and other pieces of interior woodwork, also books containing details and ideas which enabled the carpenter-architects of that day to build those most interesting rooms which are so greatly admired today.

The quaint furnishings always to be found in and around the fireplace had much to do with the simple charm which makes these interiors such fascinating pictures—the crane in the fireplace with the iron kettle hanging from it and the other simple fitments so closely associated with the life of the times were essentially decorative as well as useful.

It is interesting to note that during the period from 1700 to 1730 when wooden panelling was used and built-in cupboards were so skillfully placed in various ways in the panelling of the walls, fascinating and practical results were obtained simultaneously. A corner cupboard not only took away the angularity of the corner and eliminated the boxlike effect of the room but served as a most interesting and useful piece of furniture as well.

The record of a will made in New York in 1708 states that the wife of the testator was "to be allowed to have a new cupboard that is now in making by Mr. Shavelter." Mrs. Vanderbilt, in her social history of Flatbush, mentions a Dutch cupboard which sold for four pounds. These and many items in old inventories show the importance attached to the corner cupboard in the early days of this country.

The cupboards built into the panelling of the walls in these old cottages were marked by the same simplicity as the other parts of the interior and their appeal to us is largely due to this. They also usually have much of the charm of proportion that is one of the chief characteristics of the interesting examples of this early American type of home—an indefinable quality that seems to have been infused into the work by the artisan without conscious effort or special regard for tradition, for there is a sense of individuality and of freedom despite the general adherence to type in all the details of these interiors.

To study these early American interiors, the

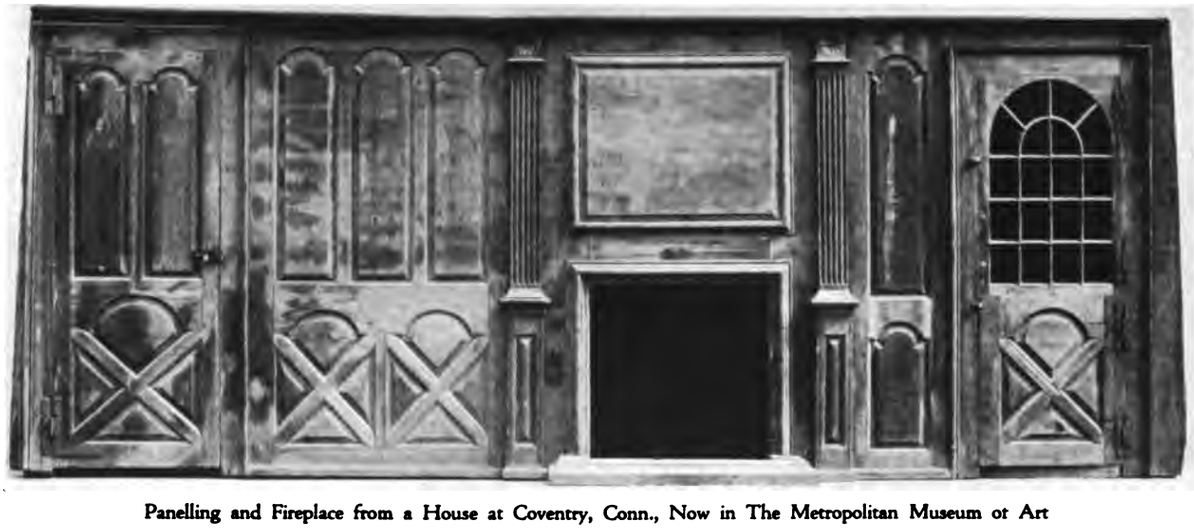


Major Andre's Room in the Beekman House

hand-made quality of which tells of the delight their makers had in creating them, should be a great inspiration to the architects and decorators of our present day. It should do much to counteract the tendency to work with cut and dried formulas used in designing interiors for apartments and the city and country houses all over America today. Perhaps we are living in an age that is too commercial, when time is a factor of so much importance that most of our work has to be turned out with the aid of machinery. Fortunately, however, we are gradually leaning towards hand-work in our best productions and the creators of good interiors are gradually appreciating the artistic value of the intimate quality that is to be found in the old panelling and the old furniture, of which many examples of the early American work have been preserved and which are available for study.

The Metropolitan Museum is doing much toward enlightening our people by the display of recent accessions which they have made in their exhibitions. Soon a wing at the museum will be devoted entirely to American interiors and their furnishings.

Conditions have changed since the days of these early interiors. The architect and decorator have many modern requirements to meet now that did not enter into the interiors of the olden days. It is encouraging, however, to know that



Panelling and Fireplace from a House at Coventry, Conn., Now in The Metropolitan Museum ot Art



Living Room in the House of Robert J. Collier, Esq., Lakewood, N. J.
John Russell Pope, Architect

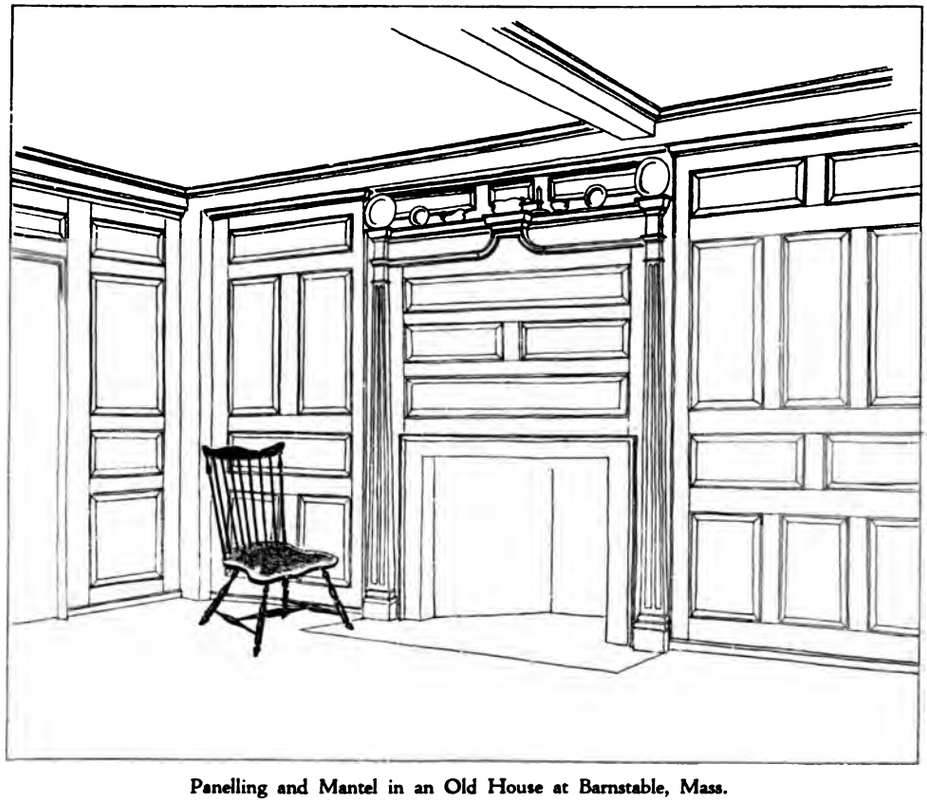


Dining Room in the House of Arthur Whitney, Esq., Bernardsville, N. J.
Lord & Hewlett, Architects



Mantel in the House of Robert J. Collier, Esq.,
Lakewood, N. J.
John Russell Pope, Architect

the work of many shows clearly that they are designing in sympathy with the spirit of the best examples expressed in our early American interiors.



Panelling and Mantel in an Old House at Barnstable, Mass.



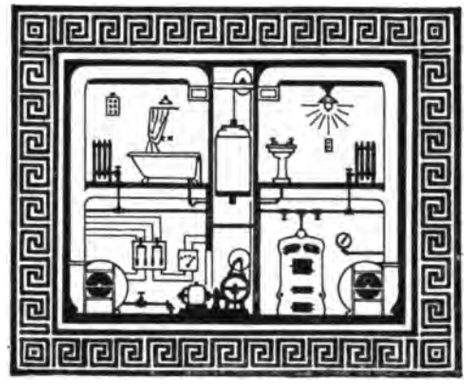
Living Room in House of Arthur Whitney, Esq., Bernardsville, N. J.
Lord & Hewlett, Architects



Living Room in the House of Robert J. Collier, Esq., Lakewood, N. J.
John Russell Pope, Architect

EQUIPMENT

DEPARTMENT EDITED BY J. F. MUSSELMAN



ELEVATOR STUDIES

THE successive steps in the development from the open well-hole and hand winch method of raising and lowering freight between the different floor levels of a building to the present day system of handling human freight by means of the modern one-to-one traction elevator attract little interest of the architect or engineer. Although it is a history of such a short period that some men who daily use the modern elevator can remember its beginning, none has seen fit to record it in detail and few realize that elevator design and construction have not only kept up with the advancement of building industry but in reality have outstripped almost any other branch of building equipment, and have produced, as far as city life is concerned, the most extensively used and safest form of locomotion.

So popular have elevators become in the last few years and so exacting have been the demands of metropolitan populations for better elevator service, that we have reached a point where many more modern buildings are overequipped, than are inadequately provided with elevators. It is a question of education of the elevator-using public and the point to be arrived at is the balance of the increased cost of elevator machinery and operation, and the loss of space occupied by the shaft against the additional time required to reach the average destination from the entrance door of the building. The question of platform area of the elevator cars is of course vital, too, for overcrowded cars will not only slow down the traffic out of all proportion to the number of passengers but will congest the service at the times when it is most needed.

The first point to be determined in making a study of an elevator problem is the exact character of the building, that is, the use to which the building is to be put. A very obvious example of the importance of determining this correctly is the elevator service in a loft building that has grown into an office building. An apartment house, a hotel, a loft building, an office building and a warehouse each requires an elevator installation totally different from the others in location of shaft, type of machine, speed, capacity, number of cars and kind of signals.

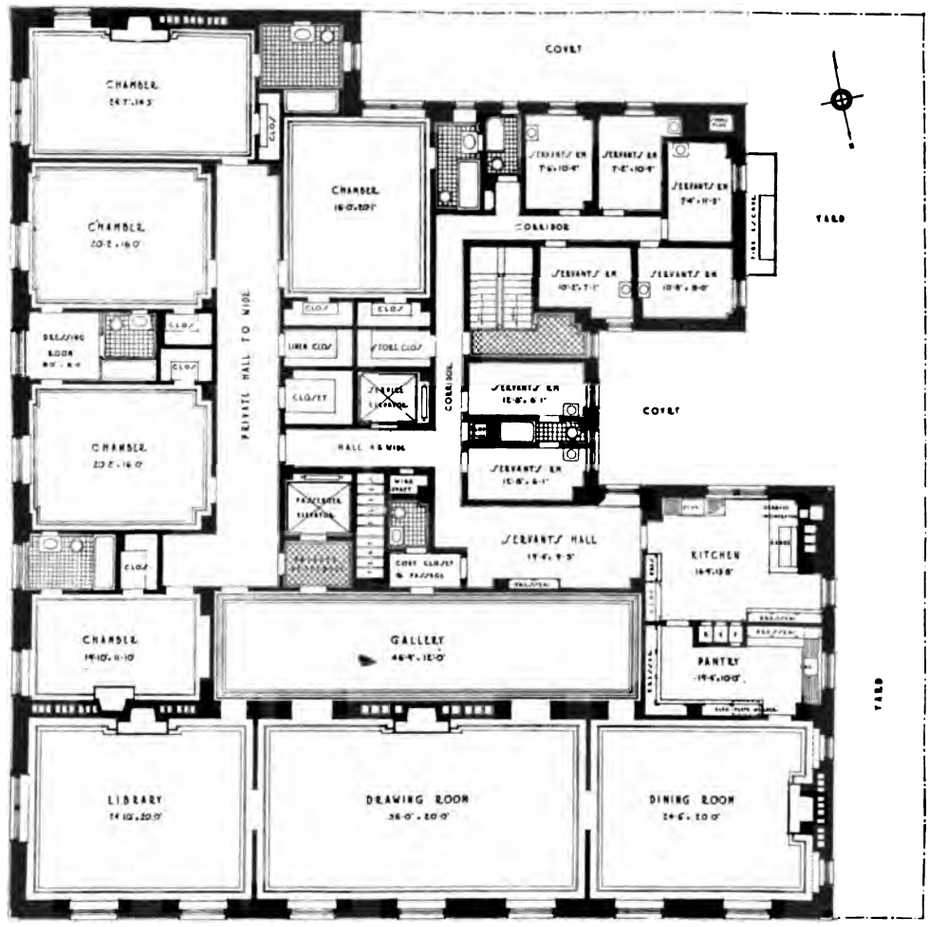
The motive power for the elevator plant, if we follow the lead of current practice, is in most cases determined without discussion. It is electric. More than ninety per cent. of the elevators installed in the larger cities of the United States within the last five years have had electric machines and practically all of the latest improvements that have been made have had to do with electric winding or electric traction machines. Among the many reasons given for the popularity of the electric machine are simplicity, economy,

ease of operation and above all safety; for the electric elevator of the modern traction type, when equipped with a reasonable number of improved safety devices, is in reality less dangerous than any other method of ascending and descending, including the use of the stairs,

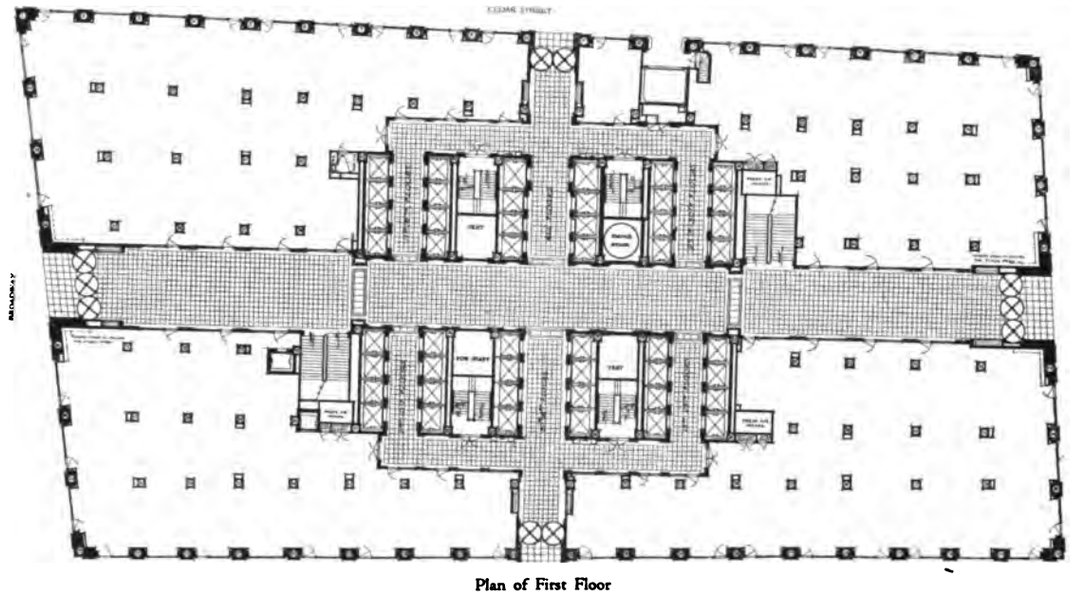
On this point of safety the plunger type of hydraulic elevator died hard. It had the advantage of looking safe with the formidable steel plunger support squarely under the center of the load. It took several years for the public to realize that it was just as dangerous to fall up the shaft as down and that that is what would happen if the plunger should ever break loose from the heavily over-counterweighted car.

Conceding that the machines will be electric, we return to the detailed study of the installation, first for the apartment house where the passenger elevator arrangement is very cut and dried; one elevator for twenty-four apartments or less, two elevators if the number of apartments served exceeds twentyfour. There seems to be no logical reason for this arbitrary number of apartments per car without regard to size of apartments or height, but after all no very fixed habit can be attributed to dwellers in apartments and observation has shown that this number gives satisfactory results.

With this ratio it is the usual practice in New York City to make the platform area of each apartment house elevator car about 26 square feet, corresponding to 12 passengers or 2,000 lbs. ultimate lifting capacity. The speed of the machines used varies somewhat with the grade of the house and the height of the building, with a minimum of 150 feet per minute for six-story houses and 350 feet per minute for twelve-story houses of the very best type. The worm-geared drum type machine has been used almost exclusively in the apartment houses which have been built within the last few years, but geared traction machines have some advantages from the standpoint of



Plan of Typical Floor
Apartment Building, 630 Park Avenue, New York
J. E. R. Carpenter, Architect



Plan of First Floor
The Equitable Building, New York
E. R. Graham, Architect

safety, and there is little doubt but what their popularity will increase as they become better known.

In spite of the apparent simplicity of elevator work in connection with apartment houses, there are a few "don'ts" which will help to avoid some of the mistakes that others have made. First, do not use overhead machines with their controllers set immediately over a bedroom, for the noise of the controllers is very difficult to overcome. The elevator shaft should be kept away from bedrooms if possible, if not, the shaft partitions should be deadened and special precautions should be used to reduce the noise of the doors. Where only one passenger elevator is used for the apartments of a building eight stories or more in height, some provision should be made for ready access to a freight elevator which may be used in emergency when the passenger machine is under repair. The cut of a typical floor plan of 630 Park Avenue, New York, shows an admirable scheme of easy access to service elevator from master section of the apartments. Don't use too few, or too slow, freight elevators; they are more heavily used than the passenger elevators and one car will not properly take care of thirty-six high grade apartments. Where there are two or more cars in one shaft, do not use ordinary drop annunciators as signals, for with such signals all cars answer some of the calls and no car answers others; an individual drop reset annunciator, synchronized to all cars gives better results.

For a hotel, the design of the elevator plant must take into account not only the passenger traffic but the baggage and the service of meals throughout the bedroom stories. The problem is generally complicated further by the introduction of banquet halls, roof gardens and ballrooms, to and from which a large volume of passengers have to be handled in very short periods; which, if provided for separately, creates a series of elevators which would be used only a few hours per day.

In a general way it may be said that the passenger traffic to the rooms of a modern skyscraper hotel may be based on eight round trip passages per day per room with peak loads at least three times as great as the average based on twenty-four hours per day.

For a loft building of the manufacturing type, or a warehouse building, the passenger service is comparatively insignificant and the amount of floor area that can be handled by two drum or geared traction elevators operating at 300 to 450 feet speed is surprisingly high; as much as 75,000 square feet per car in a manufacturing loft building. But the freight elevators of such a building must be designed to take care of the specific kinds of business that are to be carried on in the buildings. Generally the crates and cases to be handled are large and light, requiring cars of

large area with ample door openings. It is the custom in New York to require the manufacturing operatives to use the freight elevators, which necessitates all passenger safety provisions on the freight elevators; and the fact that all of the operatives start and stop work and have lunch at the same hour has to be taken into account in determining the capacity and number of freight cars.

For heavy truck-handled freight and automobiles in warehouses and garages, an automatic leveling device is coming into use. This is designed to bring the car platform to the exact level of the floors by means of a small supplementary machine which slowly rotates the brake shoes after the brake is set, bringing the car automatically to its correct position. The power saving by such a device, which eliminates the power lost in jockeying for the levels, is an important factor, and the saving in time is sufficient to make a speed as low as 100 feet per minute very effective in buildings as high as twelve stories.

The study of the passenger elevator installation required by a modern skyscraper office building is so complicated in its detail that nothing more than a statement of principles and usual premises could be given in a limited space. In such a building if the floor areas to be served are large, the platform area per car is almost invariably determined by the lifting capacity of stock machines as manufactured by the principal elevator builders, that is 3,000 lbs., corresponding to 40 square feet of effective platform per car. On this basis it is usual to allow one car for every 20,000 square feet of rentable area served; this may be reduced to 18,000 where unusually good service is required or increased to 24,000 where the individual office spaces are liberal and not apt to be crowded by closely spaced employees. The usual assumed standards for average conditions are as follows: Time required to unload, load and start from ground floor, 30 seconds; time required at each stop, 5 seconds; time required at upper limit of travel, 6 seconds. Each car will stop at four-tenths of the floors served. The time elapsed between starting of cars from ground floor should be between 14 and 25 seconds.

The number of stories served by any group of cars should be not more than 14 and if possible not over 10. This of course does not include the all-stop local cars which are required for interfloor service in buildings of more than 18 stories in height, in which it is customary to provide no overlapping stories served by two groups of cars. There is little to be gained by the use of speeds higher than 450 feet per minute for local cars on account of the difficulty in making proper landings at high speed. For express service speeds of 600 to 650 feet per minute are economical, in spite of the high current consumption, the lower speed range of the controller being used between the upper floors served locally.

As to the arrangement and location of shafts in an office building much can be said but the fixed conditions and architectural arrangement of spaces generally prevent any great flexibility of layout. A point to be borne in mind is the time required to walk from one end of a battery of elevators to the other, which should be limited to the length of four cars. This makes the alcove arrangement of cars advantageous in a large building, as shown by the first-story plan of the thirty-six-story Equitable Building. An important factor in the cost and amount of unrented space in any office building is the elevator doors and shafts. For this reason it has become customary to have no shaft doors on floors not served and no shafts extended above their usable limits of service.

Discussions of the relative advantages of machines of different types can be based only on specific conditions and a point that is sometimes lost sight of is that the initial cost of the installation is an insignificant item as compared with the maintenance and operating cost throughout the life of the installation. The current consumption per car mile for machines of different types is fairly well established and is generally stated with reasonable accuracy by elevator manufacturers. In this connection it may be said that any elevator installation which consumes more than one thousand dollars' worth of electric current per year justifies a watt meter and mileage counter on each machine. These devices are worth their cost in locating incompetent elevator operators, and, if properly watched, may be depended upon to show up any faulty adjustments and lack of rail lubrication.

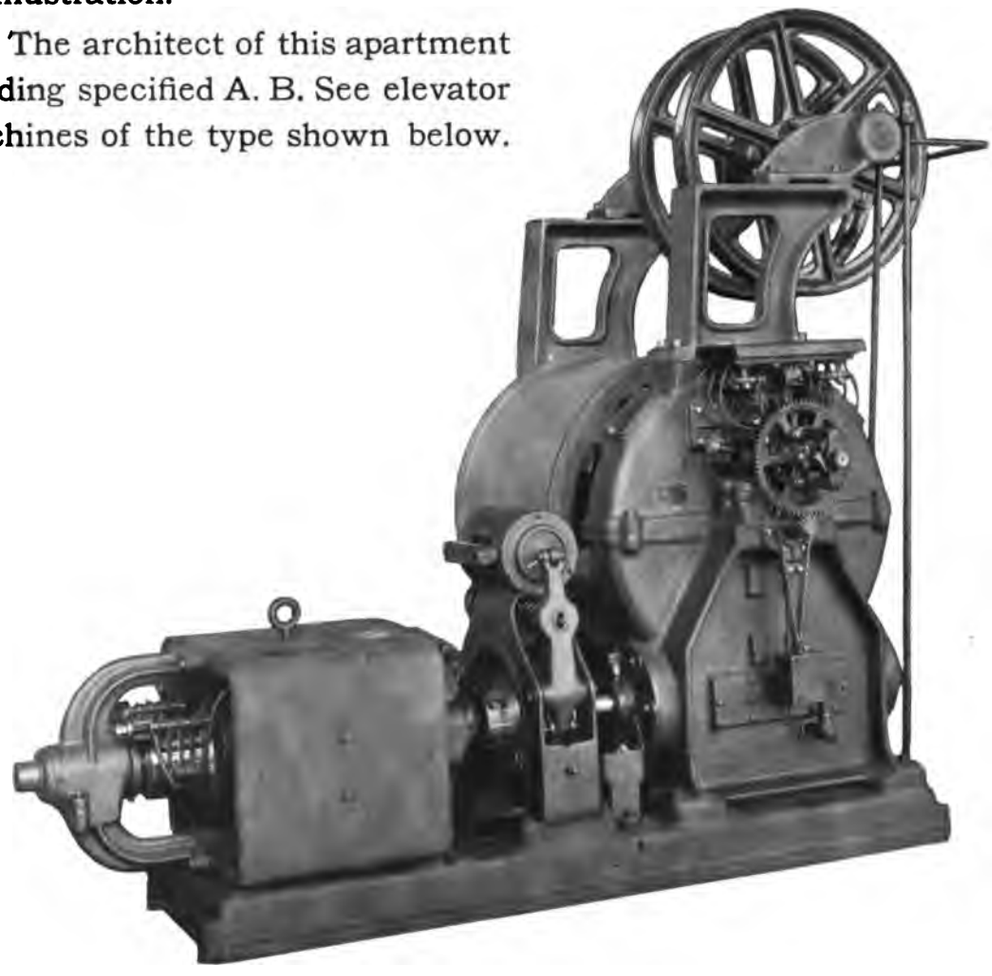
One of the principal items of maintenance costs of an elevator equipment is the cable renewals and on this item there is a very considerable variation among the different types of machines. The double length of cable required by the two-to-one rope geared machines, together with the small sheave diameters that have been necessary to meet shaft conditions have had a tendency to increase the cable costs to such an extent as to make two-to-one rope gearing unpopular and sometimes more expensive in the long run than the modern one-to-one type.

The traction type of machine has come to stay, either in its usual two-lap form or in its more recent single-lap or "V" groove form, either of which avoids the possibility of over-winding, a very fertile source of elevator accidents inherent in drum type machines.

Note—

In Mr. Musselman's article on Elevator Studies he selected the floor plan of 630 Park Avenue as an illustration.

The architect of this apartment building specified A. B. See elevator machines of the type shown below.



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EDITORIAL COMMENT ON ARCHITECTURE & THE TIMES

LOOKING at the matter from a purely business standpoint, and setting aside for the moment all higher considerations, it is clearly of the utmost importance that every man shall do all in his power to make the Victory Loan a huge success.

There is no question, of course, that the loan will be floated, but how it is taken up will make a very great difference in the business conditions throughout the country in the immediate future.

If the banks should have to take the Victory Liberty Notes in quantities, owing to a failure on the part of the public to respond properly, this would tie up the capital of the banks and prevent them from exercising their proper function in the business community—that of lending money for the carrying on of business enterprises. The loan must be taken by the people, if prosperity is to be hastened and the fruits of the peace we have won are to be enjoyed.

As individuals and as a nation we are not in the habit of allowing our bills to go unpaid; that is another reason why we must and shall take up this loan as individuals—allowing it to be taken up by the banks would not be absorbing the debt.

When we entered the war in 1917 it was necessary for the Government to provide funds for the Army and Navy and to buy materials immediately. This had to be done on credit. The proceeds of the First Liberty Loan went largely to paying off these obligations. It has been the same right along, always necessary to spend the money before it was raised, and the Government now has bills to pay for materials contracted for before the signing of the armistice and must have funds to carry out its plans for caring for the wounded, for soldiers' dependents and to complete demobilization. No man who understands the situation will be satisfied unless he has a creditable share in finishing the job.

The issues of the Victory Liberty Loan will be short-term issues and will be designated as notes and not as bonds, in conformity with rather general banking practice. Because of the early date on which they will be paid off at par, the market price of these notes will stay very close to par, which should make them an unusually attractive form of investment. As collateral for loans they will naturally command the same liberality as to ratio of loans to collateral and as to interest charged which now is accorded all government security. Banks lend something like 90 per cent. on the market value of Liberty Bonds. As the market value of the notes will rule closer to par for the reason above stated than do "Liberties," the amount obtainable on loans will be greater.

There cannot be the slightest doubt that the American people are easily capable of raising this loan, which is to be the last offered through a country-wide campaign, and that all men who perceive the need of the Government and are able to gauge the importance of the Loan in national readjustment will do their full share to see that the Victory Liberty Loan is over-subscribed.

THE reception of home-coming troops by New York City has an architectural side that is interesting. On Fifth Avenue at Madison Square stands the immense Victory Arch of which Mr. Thomas Hastings is the architect. It is 100 feet in height and is constructed of plaster and wood. It is surmounted by a group symbolizing victory. A photographic view of the Victory Arch forms the frontispiece of this issue.

At the principal points along Fifth Avenue, from Washington Square to the northern end of Central Park, decorations in which architectural and festival characteristics are combined have transformed this thoroughfare into an avenue of triumph.

The Washington Arch has been garlanded in green. Rows of pylons border the approach to the Victory Arch, bearing decorative motifs which typify the methods of modern warfare.

In front of the New York Public Library from 40th Street to 42d Street is a row of trees upon the branches of which are hung shields of ancient shape bearing the insignia of various contingents of the American Expeditionary Force.

At 60th Street, just above the Plaza entrance to Central Park, a pair of jewel-encrusted pylons support a network of jewels swung between them across the roadway.

The decoration of Fifth Avenue was done by Mr. Paul Chalfin, who had charge of this feature of the celebration.

BILLIONS of dollars worth of work, public and private, is being held up throughout the country, according to a statement by the United States Department of Labor because of the general impression that materials and labor are due for a drop within a relatively short time. That this impression is not correct, but that we are permanently on a higher price level is the conclusion arrived at by experts who have studied the situation.

This fact was brought out strongly at the Reconstruction Conference of Governors and Mayors recently held in Washington at the call of Secretary Wilson. This conclusion has fortified every governor and mayor with a most forceful argument which he will be able to use in meeting his budget committees who may suggest a delay in public undertakings.

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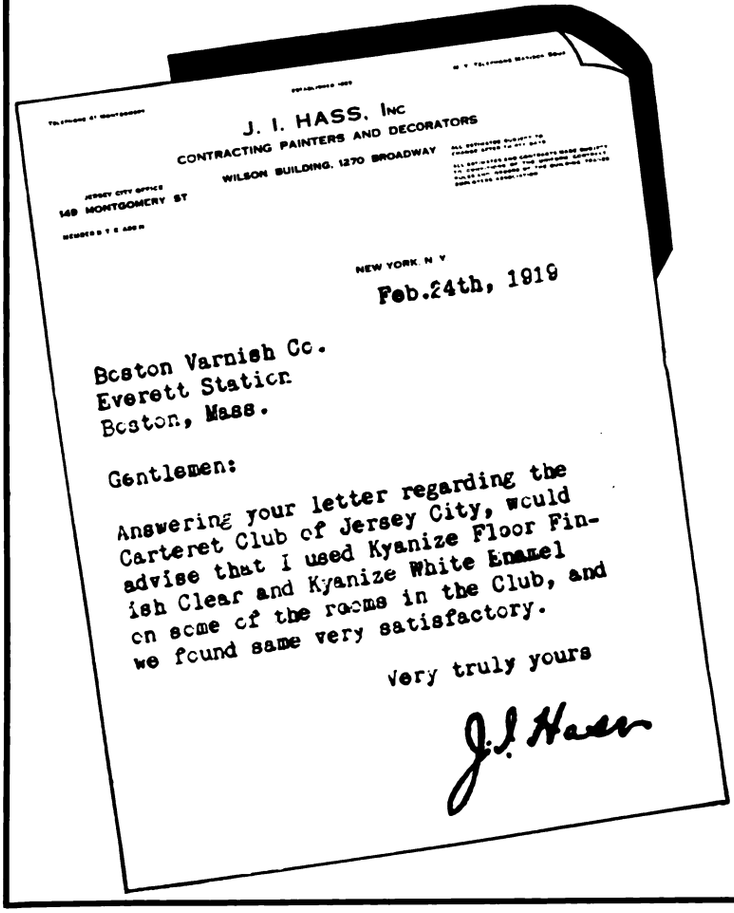
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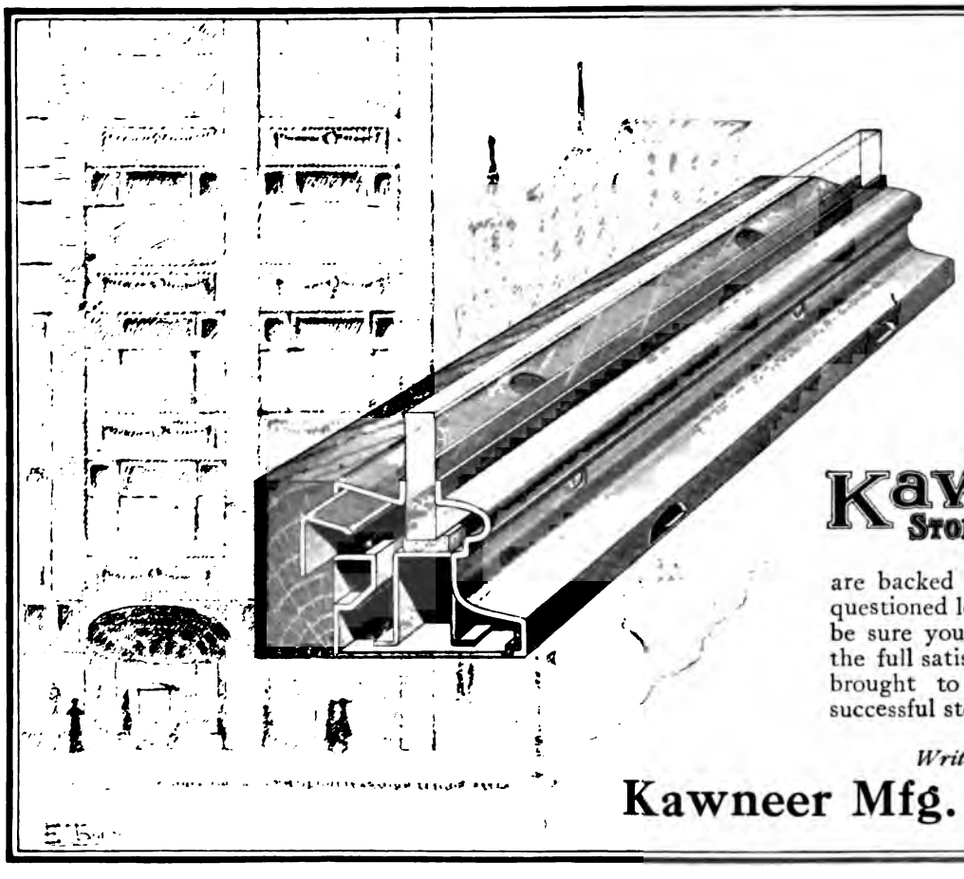
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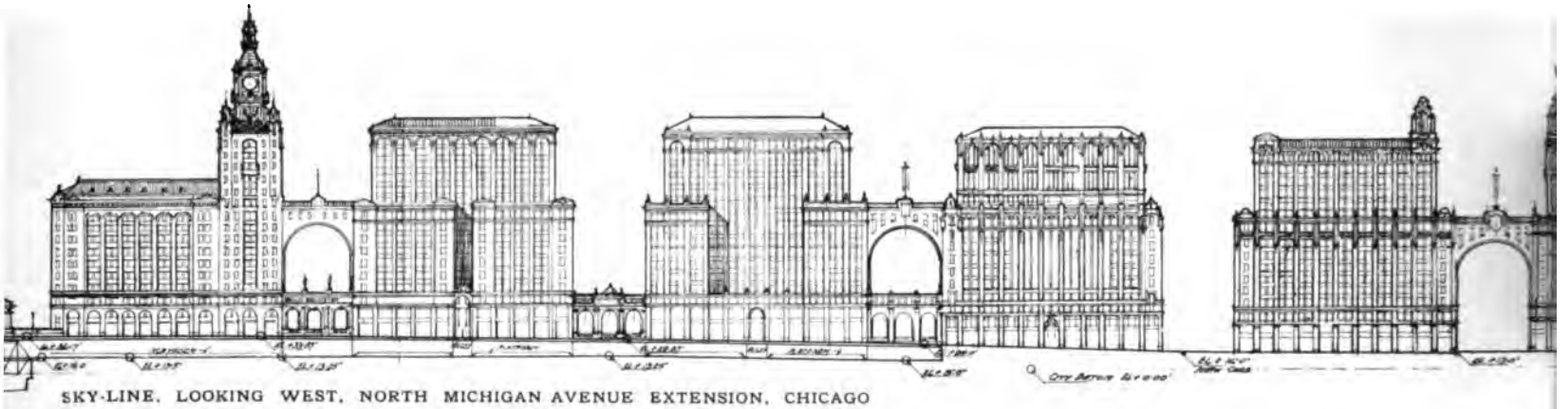
Exposition Building, Erie, Pa. Architect, Joseph Lee Contractor, William Siegrist

Grace Baptist Church, Binghamton, N.Y. Architect, E.H. Bartos; Contractor, William Ray.

Residence, Rear Admiral Chadwick, Twin Oaks, Newport, R. I.

Rensselaer County Hospital, Troy, N.Y. Architects, Pember & Camnaign.

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SKY-LINE, LOOKING WEST, NORTH MICHIGAN AVENUE EXTENSION, CHICAGO



'STIPPLED DORIC GOTHIC BRICK

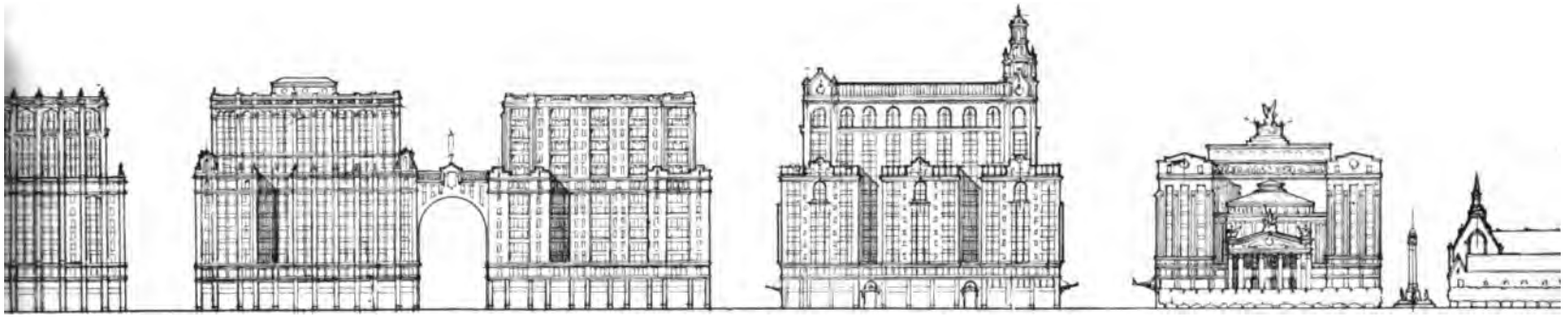
Old House Mottoes

When that antediluvian ancestor of ours, the Cave-man, started the pleasant custom of painfully carving with a flint on a boulder before his hollow dwelling, rude pictures of the mammoth and giant elk, he truly meant to extend to the tribes a hospitable invitation to share his venison and elephant steak. Following his worthy example, descendants through the centuries have inscribed on their gate posts and walls, above the lintel and over the hearth, appropriate lines of welcome and counsel. The walls of old world castles, palaces, manses, abbeys and cottages afford a wealth of welcoming verse, many of which are well adapted to present day use. Here, the first of a series to appear each month in these pages, is a translation of a very ancient Welsh door verse; nor would it be out of place carved upon any gate or hung upon any wall.

(Note:—Should you be interested in these "Old House Mottoes" we will gladly send you the complete set in advance.)



Sketched from a photograph in
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THE STORY OF AMERICAN ARCHITECTURE IN THE PHILIPPINES

PART II

By RALPH HARRINGTON DOANE, A. I. A.
CONSULTING ARCHITECT TO THE INSULAR GOVERNMENT, 1917-1918

IT HAS been said that there can be no true democracy without leadership, and that there can be no leadership worth while in democracy that is not in the interest of the people as a whole, those who seek spiritual uplift no less than those who desire only material benefits. Real democracy must provide for the masses what, until the advent of the nineteenth century, was reserved principally for the "upper classes," i. e., not only those things which protect the body, but above all those things which elevate the soul; and of these the fine arts have been, since the dawn of human intelligence, the greatest true and living expression. A government which fails to recognize the right of the people to enjoy the benefits of the great heritage of art; which fails to cultivate and encourage in its people the love of beauty; and which does not recognize, as one of its legitimate functions, the orderly and systematic development of the fine arts is no true democracy.



Sketch for a Spanish Doorway
Ralph Harrington Doane, Architect

The Philippine Government, conscious of these inherent duties, has, with respect to the fine art of architecture established rigid government supervision under the control of the so-called Consulting Architect, better named the Government Architect, and it therefore becomes incumbent upon him to formulate an architectural policy, which in the future will produce splendid monuments as well as practical buildings, and which will maintain a high architectural standard in public works,



Proposed Post-office Building, Manila, P. I.
Ralph Harrington Doane, Architect

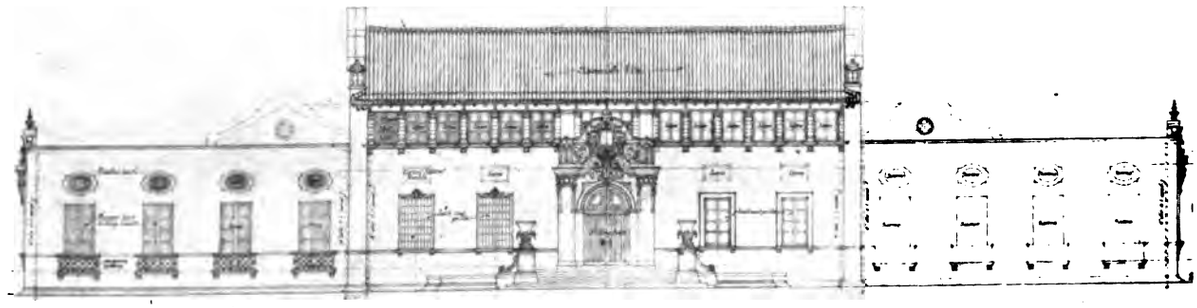
commensurate with the dignity of the Philippine Government, and calculated to engage favorable public sentiment and to promote a healthy civic pride among the Filipino people.

The fact that there is not, and never has been a characteristically Philippine architecture is not necessarily a reflection upon the genius of the Filipinos. There are many critics who contend, with some degree of justification, that America has no distinct architecture and who accuse American architects of plagiarizing the ancient Greek and Roman and Renaissance architectural forms.

America began its history, as the Philippines began theirs, without any native architecture, but has legitimately followed precedent in the solution of American architectural problems. The Philippines have been following the same policy, utilizing the best traditions of ancient and modern architecture. There is no more logic in refusing to erect buildings in the Philippines of a distinctively American character (with suitable modifications) than there would be in declining to use electricity there because of its American derivation.

The Filipino people must go through a long period in which the adaptation of European and American science shall be accomplished, before the field of original research will be reached, and so in architecture, they must proceed far with the adaptation of foreign architectures and methods of construction before a distinctly characteristic Philippine style will appear.

It is safe to predict that any distinct style of architecture in this tropical archipelago will be based on a legitimate utilization of exotic architectural motives practically modified to conform to the customs of commercial and private life and to the exigencies of tropical heat and torrential rains. Climatic condition would seem to prescribe that such an architecture will be of an open type incorporating exaggerated systems of horizontal overhangs. Buildings in the tropic may be made cool by two distinct methods: First, by the construction of tremendously thick masonry walls and minimum fenestration, keeping out the heat and resulting in dark interiors often damp and unsanitary. Second, by permitting the constant breezes, which make the tropics habitable, to freely circulate throughout the structure unhampered by impenetrable construction. This second method produces pleasur-



Front Elevation, Standard Provincial Hospital
Ralph Harrington Doane, Architect

able habitations and healthful living conditions.

It must be understood that there never has been the slightest semblance of a Philippine architecture. The only architectural monuments in the Islands, constructed prior to American occupation, are the churches. They are not, however, Filipino in character, but on the contrary typical examples of the so-called Spanish colonial architecture found in almost every Spanish colony. These churches, constructed of soft dobe stone (a conglomerate material), number in the thousands and together constitute an herculean architectural achievement of greater magnitude than has been attempted in this distant land by the Americans. Most of them are hundreds of years old, and, in addition to their relatively large size, present a charm of antiquity which is most impressive. They were designed by Spanish padres who, apparently unequipped with any architectural education, made an effort, in the absence of drawings and photographs of Spanish and European Renaissance buildings, to reproduce from memory the architectural forms which they were accustomed to see in their native land. This procedure has resulted in huge edifices, in general composition roughly modelled after rococo continental ecclesiastical types, decorated with crude and clumsy details of spontaneous and unprecedented character, merely approximating the form of more refined European work. Built of a soft porous material as they are, these edifices have through the decades absorbed enough moisture and vegetable matter to produce considerable surface vegetation, resulting in charming color and picturesqueness quite alleviating their gross proportions and clumsy details.



Wrought Iron Entrance Gate, Philippine National Bank, Manila, P. I.
Ralph Harrington Doane, Architect

Spanish colonial churches are found in all parts of the Philippine Islands. Ecclesiastical projects were, in the days of Spanish Government, constructed in remote districts, of such magnitude as to absorb almost the entire communal wealth. When the Spanish Government was overthrown it is no wonder that reactionaries attempted to destroy many of these edifices, the results of forced labor and oppression. However, today personal observation has established the fact that Filipinos now regard these huge architectural monuments with the utmost local pride and appreciation, and it is believed that these impressive ecclesiastical monuments, standing as they so frequently do in the midst of towns built up of nipa huts and modern clap-trap galvanized iron buildings, have a most potent influence upon the community, and present an impressive example of stability far reaching in its effects upon human life in the vicinity.

At the time of the American occupation, the public works of the Spaniards were totally dis-

credited. Spanish methods of building were without consideration ruthlessly abandoned, and a regime of reinforced concrete and galvanized iron inaugurated, which, for decades to come, will irradicably disfigure what once were picturesque Spanish cities and towns. Dobby stone, clay products, native Philippine woods, and other logical building materials at hand were abandoned and the importation from foreign countries of cement, steel and galvanized iron, and even wood was undertaken on a large scale. While reinforced concrete construction was and still is advisable, on account of earthquakes, for the larger and more important projects, there are vast numbers of small government buildings erected annually in which mass construction and native materials might be used exclusively.



Example of Inexpensive Standard Hospital, Wood Construction, Pavilion Type
Ralph Harrington Doane, Architect

The Philippine Islands are rich in their natural resources of bulding materials, which, except for a large cement manufacturing plant at Binangonan, Rizal Province, are largely undeveloped. In almost all parts of the islands beautiful lime stones and marbles can be found comparatively near the surface and in large quantities, but in most cases, due to volcanic action, they are broken up in pieces too small for building blocks. However, it is known that in certain locations, deeper in the earth, exist suitable quarry sites from which building blocks might be obtained which would equal in beauty the finest of Europe or America. In fact, marble is so prevalent that a kind almost exactly resembling Botticino is crushed and used for road surfacing in the province of Iloilo and Cebu. While the rich quarries of this archipelago are so undeveloped at present as to make it impossible to obtain stone ashler veneers for concrete walls, it is hoped in the future that public and private buildings in great numbers may have lime stone and marble exteriors.

The Filipino is naturally a most talented craftsman and under favorable conditions is capable of developing and maintaining a perfection in arts



Municipal Building at Barawan, Leyte, P. I.
Ralph Harrington Doane, Architect



Perforate Concave Transom Grille (4′-0″ x 7′-0″ carved in wood) for the Malacanang Palace
Ralph Harrington Doane, Architect

and crafts work comparable in quality and cunning to that which one has learned to associate with Japan and China, and it is a tragedy that his natural aptitude for artisanship has been obscured during the Spanish regime in mediocre productions solely for the lack of a proper contact on a comprehensive scale with the master artisans of more advanced peoples.

Existing conditions are propitious, together with some extraneous encouragement and organization, to build up of the architectural and allied crafts flourishing industries. That such extraneous encouragement and organization has not up to the present been sufficient to give entirely satisfactory results is demonstrated in many ways. While clay abounds in almost every locality and silica and natural coloring matters are easily available for the manufacture of ceramics, it is nevertheless necessary to use roofing tiles of cement imported from Japan; while stands of superior hardwoods, equalling the ebony, mahogany, and walnut so extensively imported into the United States, exist, it is nevertheless most difficult to get properly selected and seasoned lumber for the manufacture of furniture and interior finish; while marble is unusually prevalent and mosaics easily possible, it is nevertheless the custom to use colored cement tiles for floors, and so these instances of wasted opportunities for industrial development might be multiplied. The subject of architectural crafts in the Philippines could be expanded almost indefinitely for it is exceedingly interesting. The Government has established a demand for considerable architectural ornamental bronze work. While the most experienced bronze worker, Louis Zamora, is obtaining admirable results, he is greatly handicapped by insuffi-



Loggia on Terrace of Malacanang Palace
Ralph Harrington Doane, Architect

cient knowledge of casting; this he is obliged to make up for by an infinite amount of labor in actually carving his rough bronze castings in almost the same way wood is carved. The production of other architectural accessories is hampered by the lack of modern methods. The Chinese in Manila seem to control the wrought iron industry and their iron grille work is greatly in demand on account of the open character of tropical buildings. The skill of these celestials cannot be disputed. but they do not avail themselves of the help of modern science for they work at the forge in the same way their ancestors did. In times past wood carving of a very fine technique was splendidly done in Manila. It is regretted that some of the best carvers have passed on to their reward without disseminating their cunning. This art is, however, undergoing, a renaissance due to the exceptional demand in public buildings for furniture, and for carved wood electric fixtures of a rather elaborate character. Plastering has for years been a neglected or almost lost art. An attempt at its revival is being made and the use of sgraffito so profusely employed for the decoration of Italian buildings is being encouraged since it is a most logical and practical type of decoration for the less important architectural projects.

Filipino people as a whole are endowed with artistic impulses. Their instinct is to ornament and decorate wherever possible. They are tremendously fond of pageants and festivals and, with a public spirit highly creditable, whole communities will unite in elaborately decorating their houses and their streets for gala occasions.

In general, according to universally accepted standards, typical Filipino artistic attainments are most unsatisfying. They are unsubstantial and,



Synthetic Stone Capital for Provincial Building, Tackloban, P. I.
Ralph Harrington Doane, Architect



Example of Synthetic Stone Devised for Use in the Philippines.
Pediment Chennoux, Panquasinan Capitol Building
Ralph Harrington Doane, Architect

in short, amount to little more than tinselled claptrap. The quality of permanency, while a strong element in the great arts of the world, receives little consideration in Filipino art which is absolutely devoid of the element of substantiality.

If the prevalent artistic taste of the Philippines is considered coarse and garish, it is due not to any fundamental deficiency in the people but rather to the influences by which they have been surrounded. In the northern part of the archipelago live tribes of almost naked mountaineers, whose sole art is revealed in the decoration of head axes, spears, and the rude implements of uncivilized existence. In the southern islands, less than a thousand miles distant, live a fierce Mohamedan people, who, aside from a few touches of exotic southern Mediterranean art, are artistically as undeveloped as the northern inhabitants just mentioned. Between these extremes, live the great bulk of the Filipino people, who, prior to the American occupation, knew only their own primitive instincts and the influences of Spain, which in the matter of art were of the most tawdry and superficial character.

This rather severe impeachment, it must be said in all fairness, should not be interpreted to apply to those Filipinos who have had special education or other advantages either at home or abroad, for there are many such who possess real artistic appreciation and ability. Promising young Filipino architects, artists and sculptors might easily be cited whose attainments will be limited, not so much by their personal capacities as by the influence to which they are subjected in the future.

Filipinos are naturally most expert draftsmen;

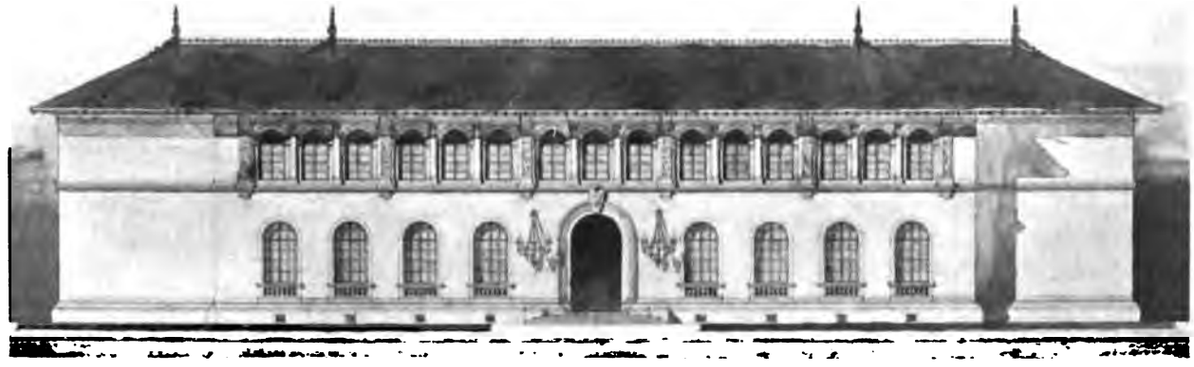


Provincial Capitol Building, Sorsogon, P. I.
G. Corner Fenhagen, Architect

the ability to draw is noticeably prevalent among them. It is regretted that there are not a sufficient number of educated architectural designers available to produce the designs required for public works. Only five Filipino architects have been educated in America and at the present time the writer knows of no Filipino students abroad pursuing architectural studies. Unless measures are advanced to interest natives in this profession, and unless immediate steps are taken by the Government to educate abroad talented young Filipinos in the fine art of architecture, it will be impossible to cope with the constantly expanding architectural program of the Government.

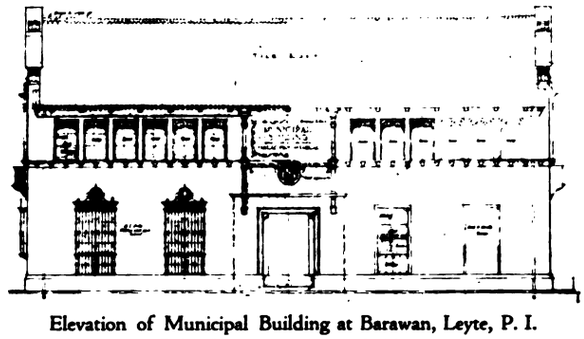
In the Philippines the standardization of certain public buildings such as schoolhouses, hospitals, markets, etc., is to a certain extent under present economic conditions, necessarily the only policy. For every schoolhouse that can be designed there is the demand for the simultaneous construction of let us say ten others; and for every hospital building that can be designed there is the immediate need for, let us say, five simultaneous similar constructions. Standardization is obviously the only practical procedure under these conditions. As the Government Architect's office grows and becomes able to cope with the demands for public works, it is hoped that the tendency toward standardization will be abandoned. Just as a person has individuality and individual taste in the matter of clothes and personal adornments, just so communities have a collective individuality and desire individuality in their public works. Instances can be recalled where a municipality, for example, has lost entire interest in a town hall project simply because it has ascertained that it was to be, when completed, identical to one in an adjacent community. Public spirit can be marshalled to improve public works in a manner to give the community distinctness, but becomes apathetic when required to construct architectural replicas. Standardization of government buildings in the United States has during recent years been seriously considered by Congress, but has met with the unqualified opposition of the architectural profession. In many cases it is impracticable because of variations in sites, market conditions, and the customs and habits of various communities. While standardization of architecture may be necessary during a formative period such as now exists in the Philippine Islands, as a policy to be perpetuated it is never desirable.

Prevalent widespread and general interest in architecture in the Philippines is most gratifying. The importer is specially interested in government function with respect to customs; the medical profession is specially interested in government control of public health; and the agriculturist is specially interested in agricultural legislation, but the importer, the physician, and the farmer, as well as the butcher, the baker and the candlestick-maker, are all intensely interested in the government architecture of their respective communities. Architecture is a major fine art wide in its appeal. It has been through all the ages a universally popular enterprise of mankind, in which people have expressed the degree of their civilization. We know more about ancient races directly and indirectly from their architectural monuments and accessories than through any other source of infor-



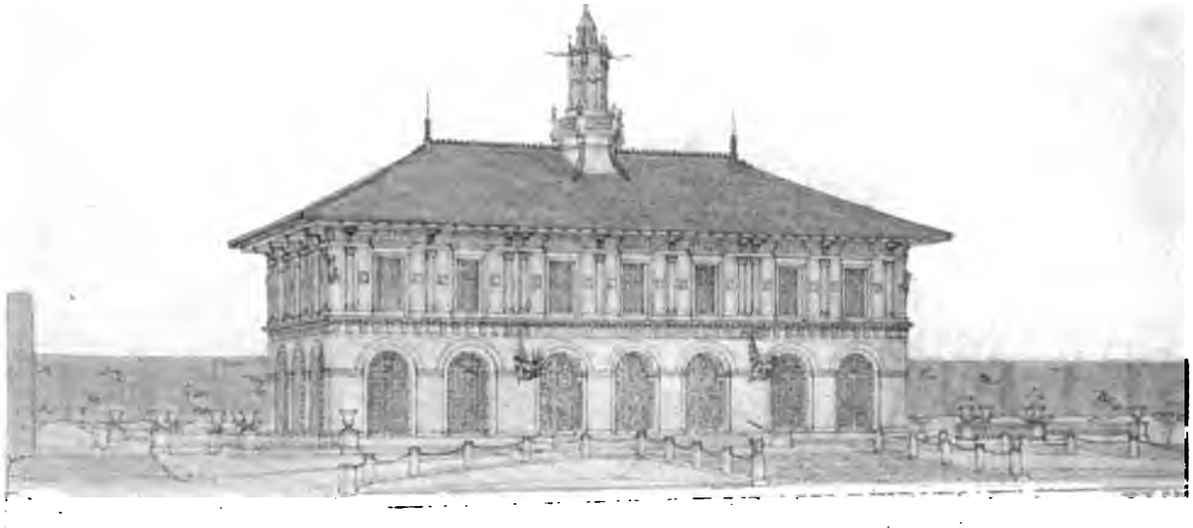
Zamboanga Normal School, Zamboanga, P. I.
G. Corner Fenhagen, Architect

mation. Let us hope that while the utilitarian aspects of Philippine architecture will not be neglected, its historical significance and artistic importance may be emphasized, that the resources of this insular possession may be marshalled in a production of an architecture sufficient in quantity and quality to announce to posterity the constructive genius and artistic accomplishments of the present. *1911-14.*



Elevation of Municipal Building at Barawan, Leyte, P. I.
Ralph Harrington Doane, Architect

Editor's Note: — In Part I of "The Story of American Architecture in the Philippines," G. Corner Fenhagen's name as architect was erroneously printed below illustrations of a proposed capitol group for Manila. Mr. William E. Parsons was Consulting Architect for the Government at the time. Mr. Fenhagen was his assistant,



Provincial Capitol Building of Ilocos Norte, P. I.
Ralph Harrington Doane, Architect

THE RESIDENCE OF AUGUSTUS G. PAINE, ESQ. NEW YORK CITY

C. P. H. GILBERT, ARCHITECT

THE problem of the city house has been given more thoughtful attention of late than ever before, and is now being studied with new earnestness and interest. Architects no longer content to build city houses along the time honored lines, with the disadvantages long accepted as necessary evils, have begun to seek ways of making life in the city more pleasant.

They are endeavoring to secure not only the best outlook, the maximum of light and the greatest possible sense of interior space but are, in many instances, providing a garden, a terrace, or a loggia, where it is possible for one to be out of doors without going on the street and where one may enjoy pleasant surroundings and some degree of privacy.

One of the most interesting of the solutions of the city house problem is the residence of Augustus G. Paine, Esq., 31 East 69th Street, New York City, of which C. P. H. Gilbert was the architect. This house has just been completed.

The house occupies a lot twenty-five feet wide and with its dependencies, the conservatory, garage, and so forth, extends through the block to East 70th Street, a distance of two hundred feet.

The design of the house is of a simple dignified character. Though it is six stories high above the street level, its apparent height has been reduced by setting back the two stories next to the top and facing the top story with a mansard roof. A balustrade at the top of the fourth story marks this break in the height of the front and forms a crowning feature, for the purpose of giving the house front proportions in which the height is not excessive in relation to the width.

The rooms are so planned and treated as to give a sense of space and quiet dignity and a good vista has been secured from the entrance door



Terrace on Roof at the Rear of the House

through the dining room into the garden at the rear. The interior treatment is homelike and simple and has a pleasing character.

An unusual feature is the placing of the butler's pantry in the building at the bottom of a court, where it is lighted by a skylight that covers the whole top of the room. This arrangement does away with the usual extension at the back of a typical city house and has proved satisfactory in this instance.

From the dining room one may pass into a conservatory and along a glass enclosed passage to the building at the rear. Here a flight of stairs leads to the roof of the garage, which has been treated as a terrace with pergolas and with boxes for trees and growing plants. The head of this stairs is enclosed in a bulkhead that is copper covered and is largely masked by the trees and a portion of the pergola. Brick piers support the beams of the pergola, which are all made from white cement as are the boxes for the plants.

The view of the house from the street at the rear is pleasing, for this portion of the house has been faced with the same kind of brick as the front, has the same kind of trimmings and has been as carefully designed as the front. The garage topped by the pergola of the terrace above it and the house rising beyond form an effective as well as unusual arrangement.



The Garage and Service Entrance



Rear

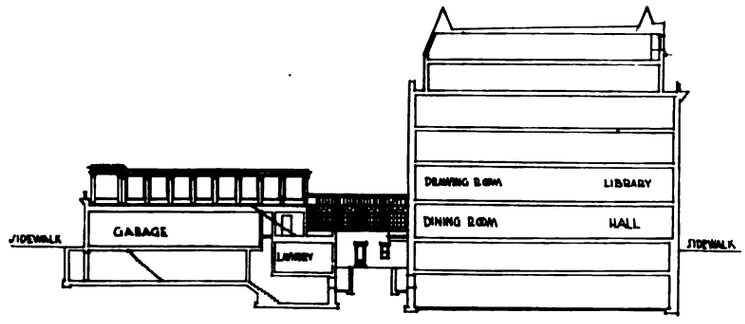
Just inside the arch of the garage entrance, at the left, is the service door, from which stairs lead down, communicating with the house by means of passages.

It is rather curious that notwithstanding the essentially modern character of the recent houses in which an effort has been made to secure a greater degree of adaptation to city conditions, there is to be seen a reversion to the principles of city house building exemplified in the remains of the cities of ancient times. The utilization of the roof and its treatment with garden features, it will be recalled, was characteristic of the houses of ancient times. The turning away from the street and the placing of the rooms to which it is desired to give the most pleasant outlook, not upon the street, but on a garden or terrace, is also characteristic of the houses of ancient times. This is not surprising, however, for in ancient Rome and Pompeii as well as in the crowded cities of the western part of Asia the people learned ages ago to adapt their buildings to the conditions of city life, something which we are only now beginning to learn.

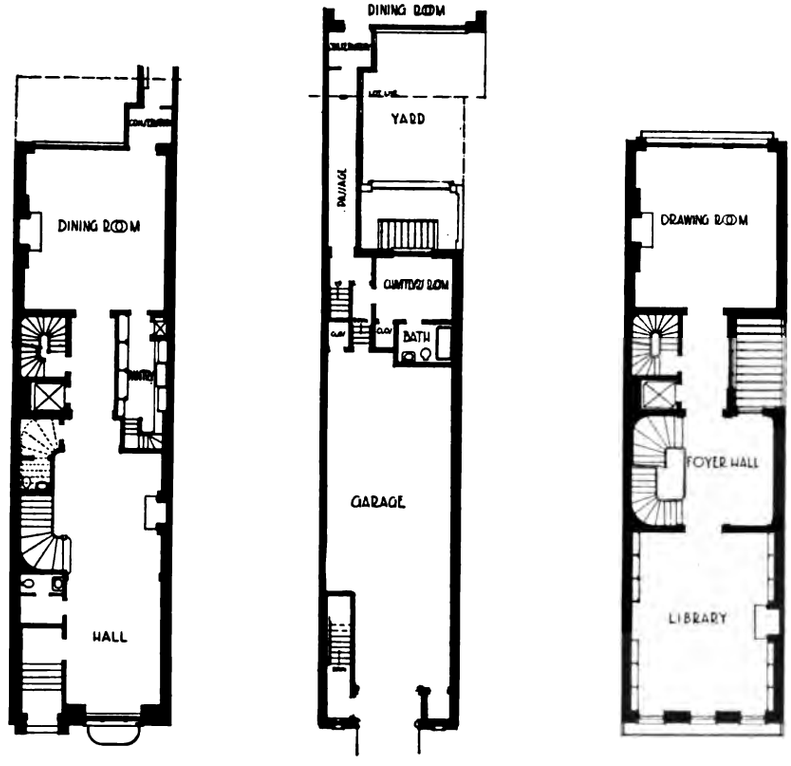
The section on page 125, together with the plans reproduced on the same page, show the working out of this interesting arrangement.

It will be noted, by reference to these illustrations, that the principal living rooms, namely, the drawing room and the library, are on the second floor where they are sufficiently high above the street level to insure comparative quiet and that the drawing room overlooks the garden on the terrace at the rear.

The windows of the drawing room not only



Section Through House and Garage



First Floor Garage Second Floor

RESIDENCE OF AUGUSTUS G. PAINE, ESQ., NEW YORK CITY

C. P. H. GILBERT, ARCHITECT

command the best possible view, but also admit the greatest possible amount of light, for the end of this room is practically all windows. Full advantage of the location of this room is taken in this way and the room is brought into close relation with the terrace.

The two top stories of the house are stepped back at the rear in a manner similar to that employed to establish the desired proportions in the front, the top story being in a mansard.

The passage which connects the conservatory, adjoining the dining room, with the stairway leading to the terrace on the roof of the building in the rear, is treated like the conservatory and, being enclosed in glass, it is light and pleasant. The dark, narrow effect which such a passage would otherwise have is avoided in this way and the passage is practically an extension of the conservatory.

The first floor and the garage are on practically the same level and the connection between the house and the building in the rear may be clearly seen on the section and by reference to the plan of the first floor and that of the garage. It will be noted that the garage is on a narrower lot than the house, this being indicated by the dotted line on the plans.



Detail of Entrance

A satisfactory location for the laundry has been secured by placing it in the building containing the garage, at the level of the basement of the house. A chauffeur's room has been provided back of the garage and over a portion of the laundry. It has a bath room and closet and a pair of windows. The stairs indicated in the section at the extreme left hand portion of the basement of the garage lead from the service entrance.

Windows are massed together in the dining room. They open upon the yard and admit ample light to this room.



Front

A convenient location has been chosen for the elevator on the passage which connects the hall and the dining room on the first floor, and on the passage between the foyer hall and the drawing room, on the second floor.

It will be noted that there are windows in the foyer hall and in the passage in which elevator is located on the second floor. These windows admit light and air from the court which extends upward from the roof of the butler's pantry.

In the front, on the second floor, the library is given a richer and heavier style of treatment than the other rooms, in keeping with its use, but it is comfortable and homelike.

By placing the entrance at one side with the stairs directly back of it the hall has been made a clear rectangular room that has lent itself well to decorative treatment and is inviting. The service stairs have been given a convenient central location.

Though, as has been pointed out, the basic ideas in the adaptation of a dwelling to an urban site are old, their present-day application, as exemplified in the house described here, is new. The plan is a variant of the familiar city house type.

THE NEW SAN FRANCISCO

PART III. CHURCHES AND CLUBS

By WILLIAM WINTHROP KENT

SAN FRANCISCO is not strong in churches, architecturally. Not that she lacks architects of ability in ecclesiastical work, but possibly because the demand for the housing of men and their business has drawn too heavily on available resources to permit the building of great churches.

The new cathedral next to the old Dolores Mission is not yet finished, but gives promise of being a success and a help architecturally to this part of the city.

Other new churches are a Christian Science Church on Haight Street near Masonic Avenue, by Mr. E. A. Mathews, one of the same denomination at Van Ness and Sacramento Streets by Mr. William C. Hays and another on the corner of California and Franklin Streets, by Mr. Ratcliff. All are of interest.

These churches, and especially the one on Haight Street, illustrate how beautifully terra cotta, glazed and colored, may be combined with colored brick work, by architects with a strong, but well controlled sense of color in materials.

San Francisco can stand a good deal more of this kind of architecture, for its climate is similar to that of many countries where brick and terra cotta have been most successfully handled. The brick architecture of Italy must have for many western architects a special value, when such works as the above are now building in this vein. Indeed, we may expect that in time a new style will gradually develop from this Italian foundation, which possibly will turn toward simplification, but, let us hope, may escape the pitfalls that have proved fatal to the other attempts to create a modern style. There seems to be no reason why, without slavishly adhering to any one school, the men of today should not, if they instinctively appreciate the good in the Italian work of the medieval masters, derive a modern treatment for commercial and domestic architecture which will be American.



The Olympic Club

The Bohemian Club, the Olympic Club and the Elks Club are all of them housed in more than usually good buildings and Messrs. Bliss & Faville's Masonic Temple is already widely known as one of the best Masonic structures, both inside and out. It is one of the most conspicuous of San Francisco's larger buildings. It also shows the influence of the early Italian Renaissance. It looks like what it is, and this cannot always be said of lodge and fraternity buildings.

Mr. Maybeck's splendid Fine Arts Building on the Exposition grounds, grows even more beautiful as weather and plant life give it added interest. There is a poetic beauty and almost sadness of charm about it now, which does not detract from its grandeur, but rouses hope that it will be kept in enduring form for the years to come.



The New Masonic Temple
Bliss & Faville, Architects

The great civic center grows more attractive each day with the growth of trees and plants and the weathering of the very beauti-

ful City Hall, Public Library and Auditorium.

Such a collection and good buildings cannot fail to exert a constant influence for the general betterment of design even in private buildings both domestic and commercial. It would have been a pleasure to include in this incomplete account many other fine buildings by Mr. Mullgardt, Mr. Farr, Mr. Hobart and others but lack of space prevents it.

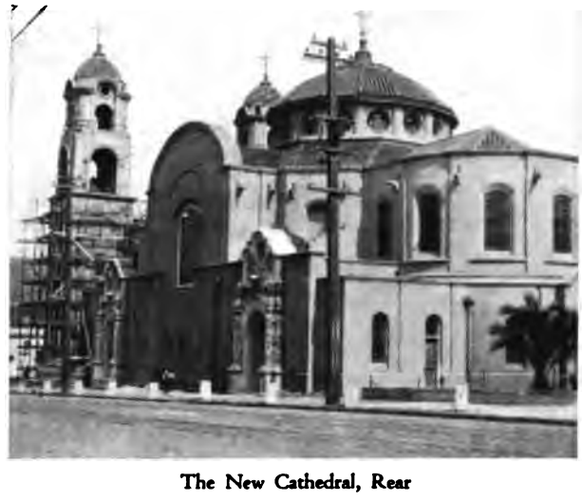
It is to be remembered that San Francisco in rebuilding so well has had to fight hard conditions. She is in a sense isolated, being farther away from the sources of plentiful building stones, clays, marbles and slates than her more eastern sisters, and has had to attract her architects and citizens by the charms of her shores and the hospitality of her soil and climate.

This she has done notably well, and the excellent work already begun, the beautiful structures already completed are the reliable promise of a still further development to follow, and warrant her citizens in looking forward to immeasurably more noble architectural triumphs than those she is now enjoying.

The ocean front beyond the Cliff House will in time develop into an architecturally good feature of the splendid boulevard which circling about and returning over the Twin Peaks affords even now one of the most varied and beautiful drives of the Golden Gate neighborhood.



Church of Christ Scientist, California and State Streets
Mr. Ratcliffe, Architect



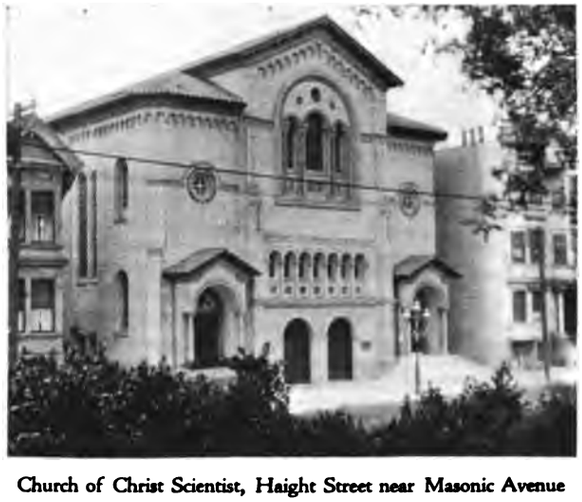
The New Cathedral, Rear

The apartment houses which are rapidly increasing in San Francisco do not yet compare in character with those of many other great cities, but their rapid improvement in the last year or two is very noticeable, showing the impulse of the tide of betterment which is surging over this city.

Of Chinese architecture there is much in the newly built Chinese quarter, but it sadly lacks the picturesqueness of the buildings of the old quarter where Robert Louis Stevenson used to enjoy his *siestas* in the park in which now stands the beautiful and appropriate fountain erected in his memory.

However, it will take only a few years of California sun and rain to weather to a more harmonious tint many of the really good new Chinese facades of which one catches glimpses in looking up Grant Avenue from Sutter Street.

After all, every city needs a good architectural commission to really control and improve its architecture and every city will, no doubt, have one some day, meanwhile a great general advance is noticeable in San Francisco and that is all we can properly expect now. Let us hope the city will keep up the same highly creditable pace in architectural improvement which it has shown in the last ten years.



Church of Christ Scientist, Haight Street near Masonic Avenue
E. A. Mathews, Architect

THE WILLIAM H. BLISS MEMORIAL, WOODLAWN CEMETERY, NEW YORK CITY

WELLES BOSWORTH, ARCHITECT

IN THE thought which it embodies and in the manner in which this thought is expressed the William H. Bliss memorial in Woodlawn Cemetery is different from the usual kind of memorial and is a significant contribution to the art of funereal commemorative monumental design.

In shape and general scheme this monument is the conception of Mr. and Mrs. Bliss. It consists of an elliptical curved wall at one point of which a pedestal supports a beautiful group of sculpture representing the onward progress of two souls. In the back of the pedestal are bronze doors and enclosing niches for cinerary urns. In the ground in front of the wall and near a seat with heavily bracketed arms, one notices a large bronze plate decorated with a representation of a great wave. A ring permits this plate to be lifted so that the ashes may be scattered at the bottom of a shallow depression and thus become once more part of the earth.

One may sit on this bench and contemplate the group of sculpture at various angles and distances. In this it is different from the usual exedra from which one looks away from the sculpture rather than toward it as a rule.

Mr. Welles Bosworth was the architect under whose direction the monument was built, but the design follows the lines of a model submitted by Mr. Robert Aitken in the competition for designs for this memorial. Mr. Herbert Adams was the professional adviser on the jury.

The position of this monument is an especially fortunate one. From it one sees nothing but natural woods and beautiful lawns that lead down to a ravine. There is nothing depressing or mournful to be felt here but beauty of thought, grace of line and inspiration are to be found in this modern and artistic example of memorial design. It is universal in its appeal. Contrary to the usual practice personality is so far effaced that even the name of the Bliss family does not appear. It is a graceful and helpful expression of a spiritual conception of the highest order.

Instead of having the air of ostentation too often associated with memorials and the look of being merely the money's worth of material, the expression of materialism or sentimentality, this design gives evidence of thought and of a serious purpose and it establishes new precedents in this field of design.



Sculpture Typifying the Progress of Two Souls

GARDENS FOR MRS. ARTHUR SCOTT BURDEN JERICHO, LONG ISLAND, N. Y.

JOHN RUSSELL POPE, ARCHITECT

DESIGNED to form a suitable setting for the constantly developing schemes of planting which Mrs. Burden finds pleasure in planning and carrying out, it was desired that these gardens should be in themselves somewhat formal without clashing with the wild character of the surrounding woodland and fields which are among the most delightful features of the estate.

These aims have been accomplished mainly by enclosing the lower garden in walls of fieldstones that produce a rugged and informal effect and harmonize with the country and by constructing the gardens on a series of three terraces, one below the other, increasing in simplicity as they recede from the house and enter the woodland.



Stairs in the Rose Garden

The garden next to the house is known as the "tea garden" or "west garden." A living porch of delicately wrought iron in the center of this end of the house effects the transition between the house and the garden, and two loggias built in the tea garden and facing each other, mark the end of this garden and reflect in their design the architectural character of the house. These loggias are connected with the house by garden walls of the same kind of brick as the house.

There is a descent of several feet to the next level where the "rose garden" is located. Two flights of winding steps, side by side, and facing each other, lead down from the west garden to the rose garden. These steps are of heavy flagstones broken to the required shape, and the retaining wall is of fieldstones, laid without mortar. The stairs have simple iron railings.

Adjoining the rose garden on the west is the long garden at the next lower level. The principal feature of this garden is the T-shaped pool, designed on the lines of the casting pools found on old English estates, which were used for practicing the art of fly casting by enthusiastic followers of the sport of trout fishing. The long arm of this pool measures about eighty-five feet.

The rough slabs of stone that edge the pool, the walls of fieldstones that enclose the garden, and the rude arched openings that penetrate the walls at opposite sides, all are in perfect keeping with the encompassing woods.

These gardens give added charm to the house which is an excellent example of design in the manner of the Georgian period, dignified, homelike and admirably proportioned. Much of the charm of the house is undoubtedly due to the fine sense of balance evident in its design and to the beauty and suitability of the detail.



LOGGIA

THE MALACAÑAN PALACE, MANILA, P. I.

The Residence of the Governor-General

RALPH HARRINGTON DOANE, ARCHITECT



THE CASTING POOL

GARDEN FOR MRS. ARTHUR SCOTT BURDEN, JERICHO, N. Y.

JOHN RUSSELL POPE, ARCHITECT



WALL OF LOWER GARDEN



THE WEST GARDEN

GARDEN FOR MRS. ARTHUR SCOTT BURDEN, JERICHO, N. Y.

JOHN RUSSELL POPE, ARCHITECT



ENTRANCE HALL



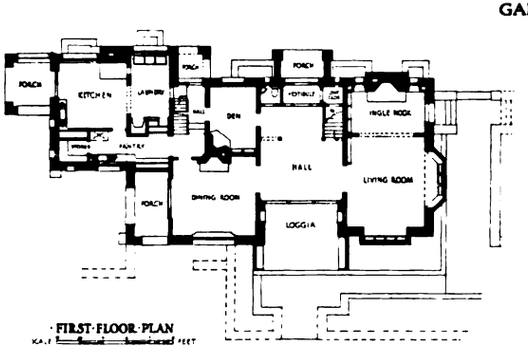
DRAWING ROOM

RESIDENCE OF AUGUSTUS G. PAINE, ESQ., 31 EAST 69TH STREET, NEW YORK

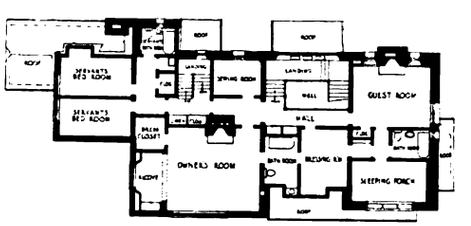
C. P. H. GILBERT, ARCHITECT



GARDEN FRONT



·FIRST·FLOOR·PLAN·



·SECOND·FLOOR·PLAN·

HOUSE FOR ARTHUR C. FRASER, ESQ., RIDGEFIELD, CONN.

GROSVENOR ATTERBURY AND JOHN A. TOMPKINS, ASSOCIATED ARCHITECTS



ENTRANCE FRONT

HOUSE FOR ARTHUR C. FRASER, ESQ., RIDGEFIELD, CONN.

GROSVENOR ATTERBURY AND JOHN A. TOMPKINS, ASSOCIATED ARCHITECTS



DETAIL

HOUSE FOR ARTHUR C. FRASER, ESQ., RIDGEFIELD, CONN.

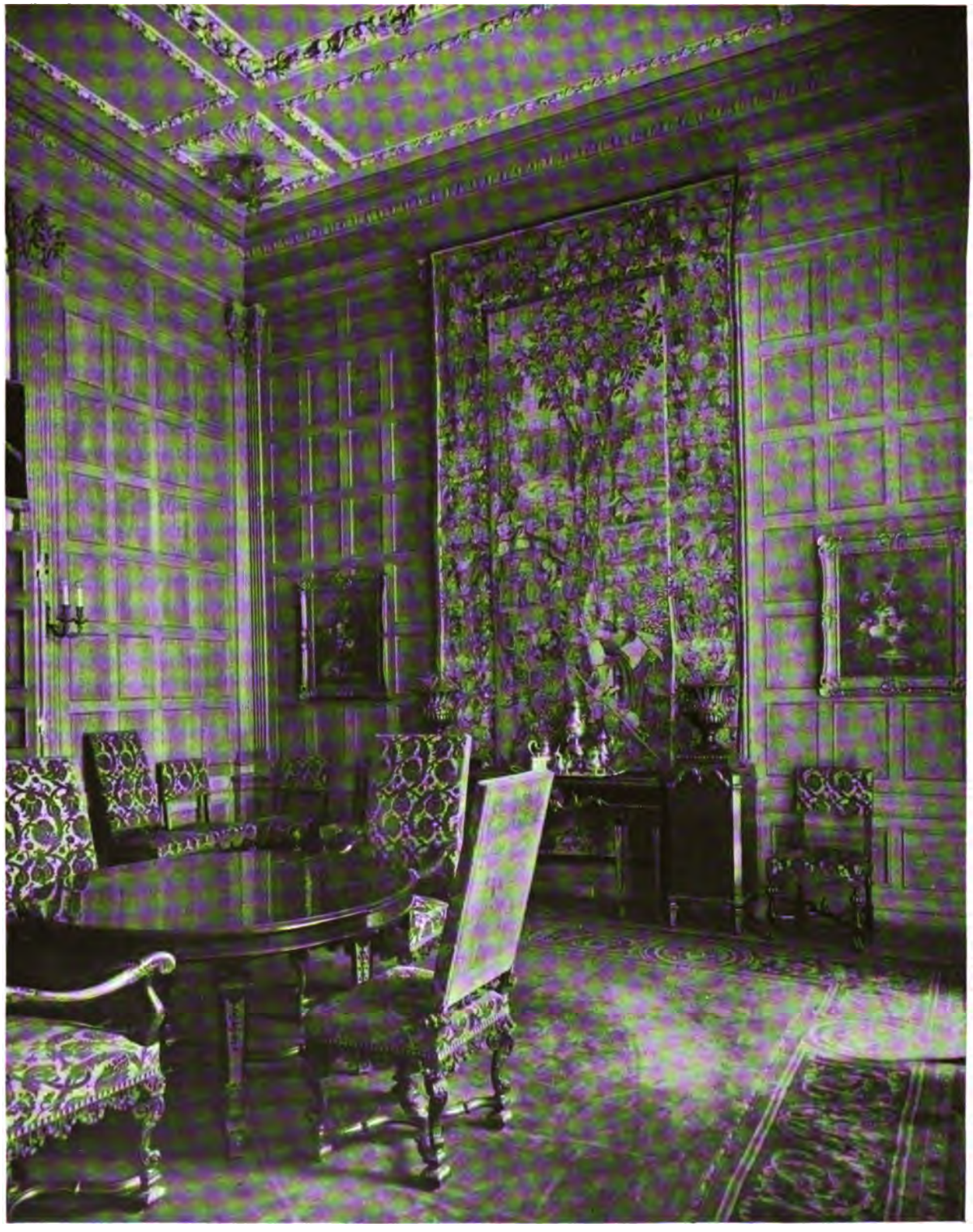
GROSVENOR ATTERBURY AND JOHN A. TOMPKINS, ASSOCIATED ARCHITECTS



GENERAL VIEW

THE WILLIAM H. BLISS MEMORIAL, WOODLAWN CEMETERY, NEW YORK CITY

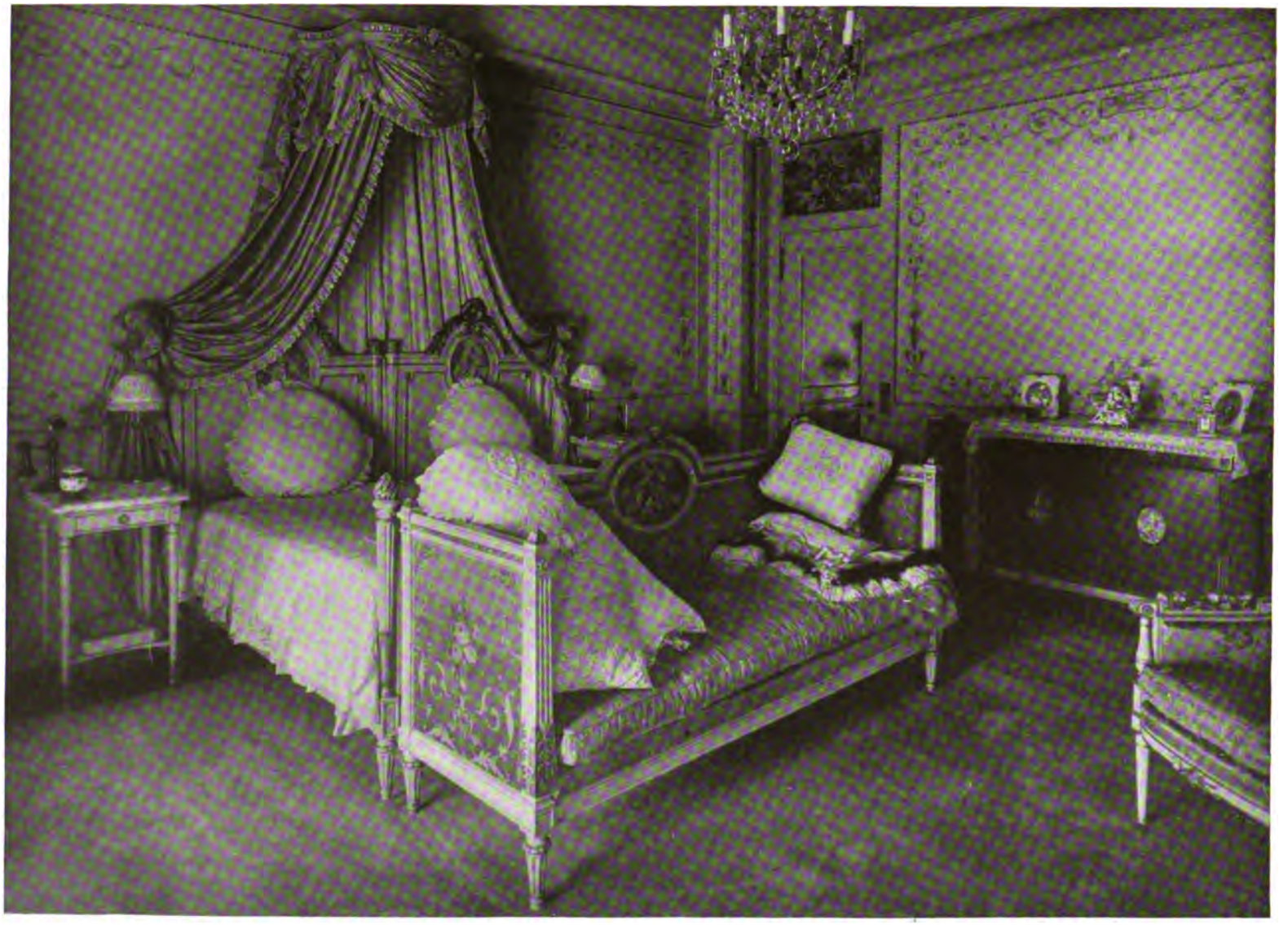
WELLES BOSWORTH, ARCHITECT ROBERT AITKEN, SCULPTOR



THE DINING ROOM

RESIDENCE OF EDWIN S. BAYER, ESQ., 32 EAST 70TH STREET, NEW YORK

TAYLOR & LEVI, ARCHITECTS



THE PRINCIPAL BEDROOM

RESIDENCE OF EDWIN S. BAYER, ESQ., 32 EAST 70TH STREET, NEW YORK

TAYLOR & LEVI, ARCHITECTS



THE DRAWING ROOM, NORTH END

RESIDENCE OF EDWIN S. BAYER, ESQ., 32 EAST 70TH STREET, NEW YORK

TAYLOR & LEVI, ARCHITECTS



THE DRAWING ROOM, SOUTH END



FIREPLACE IN THE DINING ROOM

RESIDENCE OF EDWIN S. BAYER, ESQ., 32 EAST 70TH STREET, NEW YORK

TAYLOR & LEVI, ARCHITECTS



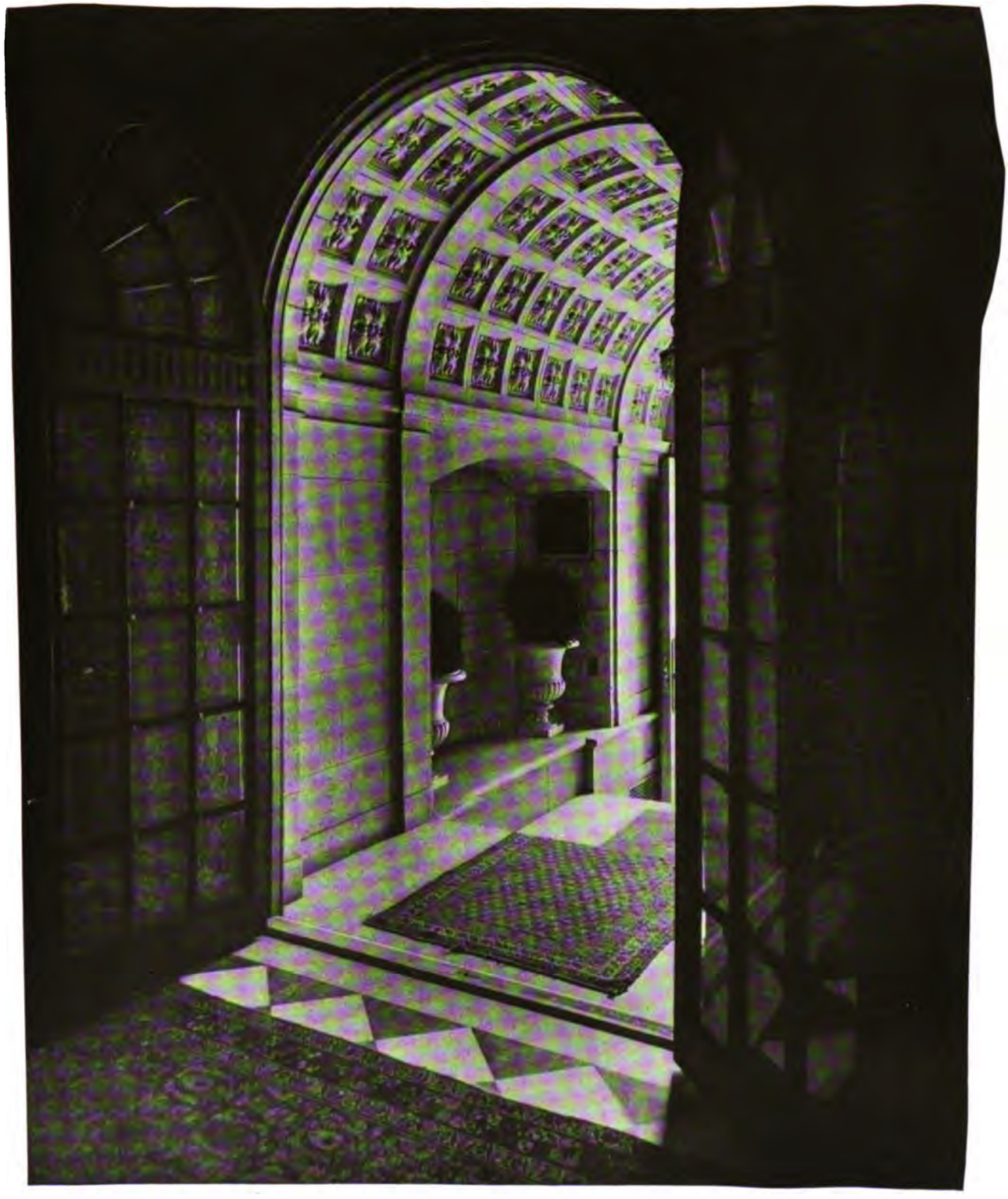
THE BOUDOIR



HALL AND CARD ROOM

RESIDENCE OF EDWIN S. BAYER, ESQ., 32 EAST 70TH STREET, NEW YORK

TAYLOR & LEVI, ARCHITECTS



THE ENTRANCE VESTIBULE

RESIDENCE OF EDWIN S. BAYER, ESQ., 32 EAST 70TH STREET, NEW YORK

TAYLOR & LEVI, ARCHITECTS

THE REVIEW OF INTERIORS

Department Edited by J. H. Phillips.



EARLY AMERICAN INTERIORS, PART II

COLONIAL architecture, that much abused term, seems to mean to so many people anything that is painted white and has a suggestion of classical detail. Is not "Early American" architecture better? It is a term that has the advantage of not having been misused, it is more appropriate and more definite. We may go even further and speak of the subdivisions of Early American architecture by centuries as we are in the habit of doing in the case of old European work. There is no reason why we should not more often speak of Sixteenth Century American archi-

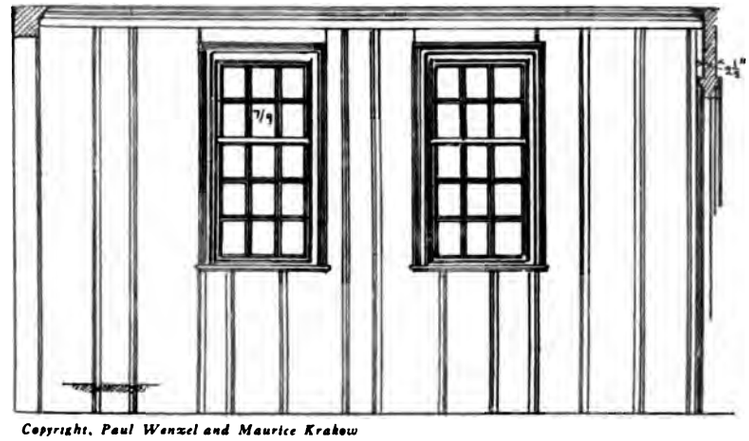


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The Fireplace in Living Room, Paul Revere House, Boston, Mass.

tecture or early Eighteenth Century American architecture or interior decoration just as we speak of Eighteenth Century French architecture.

By doing this we may gain a more orderly conception of the types of early work and of their relation, we may also make ourselves more readily understood in talking about an artistic period that lasted long enough and was affected by influences of a sufficiently diversified character to embrace a wide range of motifs and characteristics, varying all the way from the home-like simplicity of the Paul Revere house to the delicacy of enrichment in detail found in some of the rooms at Mount Vernon.



Copyright, Paul Wenzel and Maurice Krakow

South Side of Dining Room, Holabird House, Falls Village, Conn.

From "Measured Drawings of Some Colonial and Georgian Houses" by Donald Millar. Courtesy of the Architectural Book Publishing Co.

"Early American" architecture calls to mind those interiors which are closely associated with the early history of our country, and that express the life and spirit of the times in which they were created with quaint beauty, honesty and simplicity.

Such interiors as those of the Paul Revere house, when one comes to study them sympathetically and to analyze them, reveal the subtilties that entered naturally into the early work as a result of its essentially personal character, the touch of the hand, the color and texture that go to make up the indefinable human quality.

These things the architect and decorator of the present day too often eliminate, and the result is suggestive of the T square and the planing mill, hard, dry and entirely lacking in sensitiveness and charm.

The fondness for accuracy, for mechanical smoothness of surface and for straight lines seems to have become an obsession with the designers of modern times which shows in much of our work.



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The Kitchen, Paul Revere House, Boston, Mass.

If there is one thing above all others which we might well learn from these old interiors, it is to substitute sensitiveness for hardness of line and reasonable freedom of interpretation for archaeological accuracy.

What could be more direct and simple than the sheathing of the walls with vertical boards in the kitchen and the living room of the Paul Revere house, or more delightfully natural and honest or more genuinely homelike!

The broad fireplaces in the living room and kitchen of the Paul Revere house have an air of friendliness that is all the more pronounced because of their simplicity. We may easily imagine



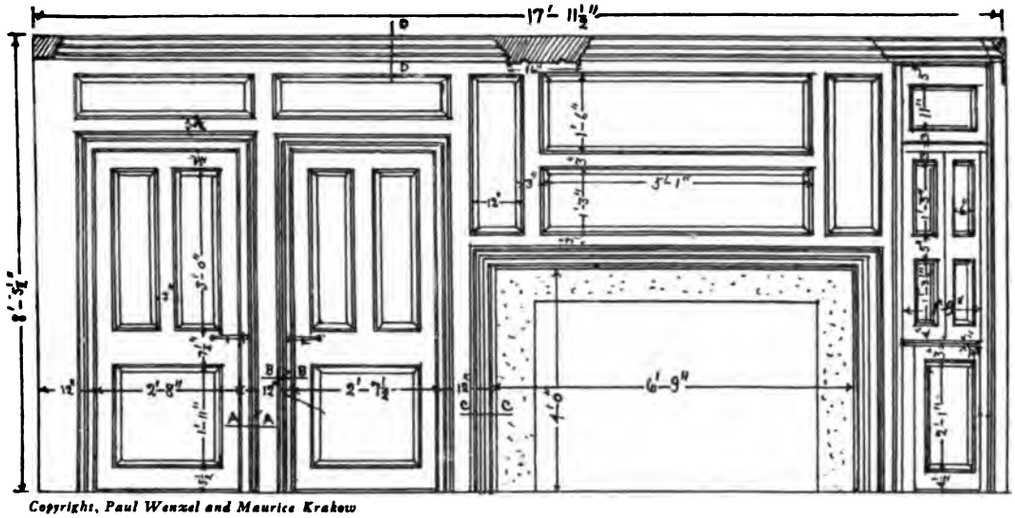
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Ell Chamber, Paul Revere House, Boston, Mass.



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Paul Revere Chamber, Paul Revere House, Boston, Mass.



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West Side of Dining Room, Holabird House, Falls Village, Conn.

From "Measured Drawings of Some Colonial and Georgian Houses," by Donald Millar. Courtesy of the Architectural Book Publishing Co.

these interiors as the appropriate setting for the family life of the sturdy men and women who came here to found a new civilization on the edge of the wilderness of an unknown continent and carried with them the Anglo-Saxon love of home, which they managed to express so well with the simple materials and the simple means at hand.

If we link the architecture with the life of the times in which it was created, how much more interesting it becomes and how much more meaning it has!

Then why not distinguish between the succes-



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Paul Revere Chamber, Paul Revere House, Boston, Mass.



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Family Living Room, Paul Revere House, Boston, Mass.



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"Grandfather Nutter's Room," Thomas Bailey Aldrich Memorial, Portsmouth, N. H.



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"The Kitchen," Thomas Bailey Aldrich Memorial, Portsmouth, N. H.



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"The Spare Room," Thomas Bailey Aldrich Memorial, Portsmouth, N. H.



A Simple Stairway Inspired by the Old Work

sive developments of early American architecture in our own minds even if we choose to combine features of related phases in our work? A blending of elements of various origin and age is to be seen in most of the old interiors. It came about naturally and contributes to the sense of ease as well as to the interest of these rooms.

The kitchen and living room of the Paul Revere house adhere closely to the English cottage type in breadth of treatment. The sheathing of the wall of the end of the room where the fireplace is and in the heavy beam construction of the ceiling are extremely simple and are reminiscent of Elizabethan cottages while the wall paper, representing architectural motifs of a classical type, reflects the contemporary taste in the decoration of English houses of a more pretentious character. The bedrooms of this same house show even more clearly the influence of the prevailing Georgian style. The same association of dissimilar elements is to be noted in the interiors of the Holabird house at Falls Village, Connecticut, built, probably, about 1735. The south side of the dining room in this house is covered with vertical boards somewhat similar to the treatment found in the Paul Revere house, while the west side of the dining room is panelled in a manner that is comparatively elaborate.

Graeme Park House, Horsham, Pennsylvania, is notable not only for its panelling but for the fact that the window sash, which are of the double hung variety, are hung with cords and counterbalance weights. This is believed to be the earliest known example of the use of sash weights in the colonies.

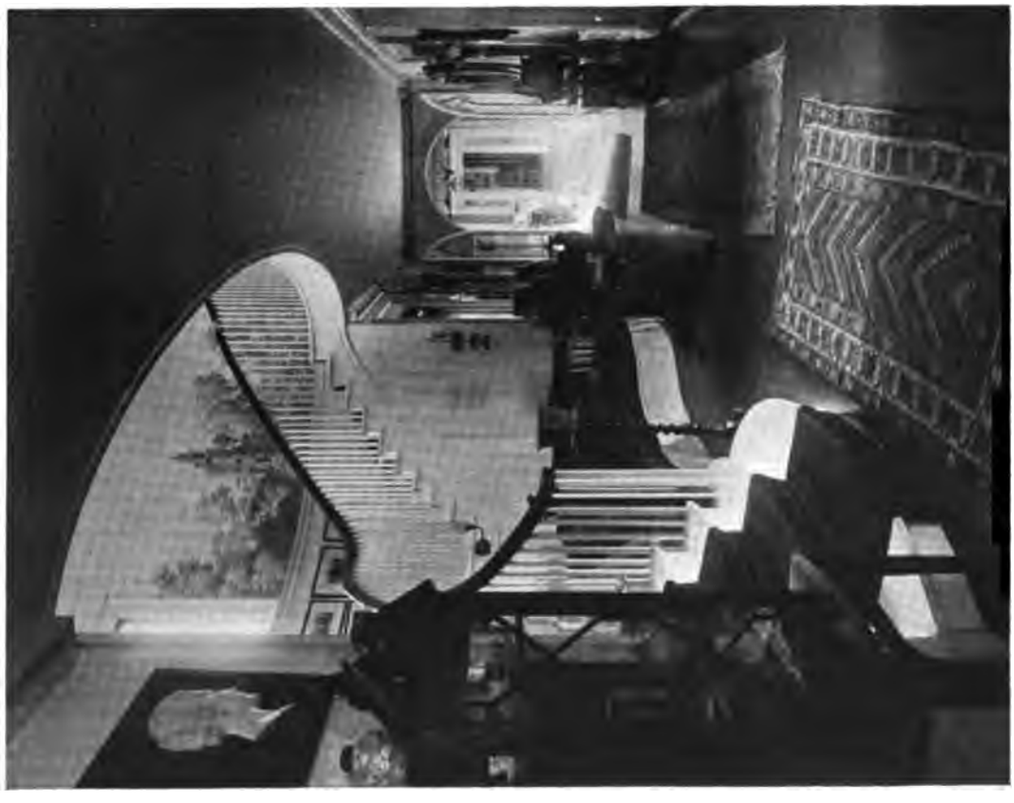
These interiors emphasize the fact that though there was a great deal of variation, between the phases of development and there was great freedom of personal interpretation, there was, nevertheless, a general adherence to type during each period of development of early American interiors as well as a mingling of types. There is a national spirit in all of the early American work.



Living Room in the House of Robert J. Collier, Esq., Lakewood, N. J.
John Russell Pope, Architect



Stairway in the House of G. Arnold Dimond, Esq.
Hartsdale, N. Y.
Renwick, Aspinwall & Tucker, Architects



Hall in the House of James L. Breese, Esq.
Southampton, Long Island, N. Y.
McKim, Mead & White, Architects

THE REVIEW OF RECENT ARCHITECTURAL MAGAZINES

By C. HOWARD WALKER

IN the issue of *Architecture* for February, the Town Hall at Milford, Conn., by Tracy & Swartwout, is described by Mr. Swartwout and justifies the careful consideration given their work. The Colonial tradition is admirably sustained and the lantern better than is found even in the old Colonial buildings. The unavoidable excessive contrast in scale between the order of the portico and the order of the lantern has always made this problem a hazardous one. Sir Christopher Wren, himself, found it far from easy to arrive at a satisfactory solution. In the side elevation, the excellent side masses, corresponding to the aisles of a basilica, seem large for the central hall, corresponding to the nave. A higher clerestory seems to be needed rather than the interruption of the cornice by three gables. The detail is excellent, refined and delicate. Mr. David Emerson writes well upon specifications, especially warning against vagueness, indefiniteness, and the introduction of alternatives. New Capitol Theatre, New York City, by Mr. Thomas Lamb, is designed in the Empire style, simply, delicately, and in excellent scale. It is in striking contrast to the Baroque eccentricity which has traditionally been associated with theatre auditoriums. Mr. Cooper writes an appreciation of the work of all the collaborators. They seem to have been a very happy family, and are to be congratulated upon the results. Mr. Caparn's published lecture upon "Garden Architecture and Sculpture," a lecture which he gave at the Metropolitan Museum of Art a year ago, is more general than specific, as probably it should be for a popular audience. His illustrations are not always fortunate. The garden beds of the Villa Albani being peculiarly tortuous in their lines. There is yet to be written an essay upon the charm of the association of architecture, sculpture and nature in gardens. In editorial comments upon war memorials, Mrs. Herbert Adams is quoted as suggesting that there is a variety of motives any one of which

(From "The Architectural Forum")



Hall, House of George M. Allen, Esq.
Charles I. Berg, Architect

(From "Architecture")



(From "Architecture")



Front and Rear, New Town Hall, Milford, Conn.
Tracy & Swartwout, Architects

could be made a memorial. This is common sense, and would seem to "go without saying." At the same time the New York chapter, with a naive simplicity which is elemental, proposes to canvass the ideas of anybody and everybody in the State, so that the golden needle may be found in the haystack, and some "mute inglorious" idea may not be inadvertently overlooked, and that at least one prize, "with possibly other prizes," shall be awarded by a jury of representative citizens. "First catch your hare"—who are representative citizens? The suggestion is that they be selected from such organizations as the Chamber of Commerce, the Merchants' Association, the Fine Arts Association. Why not the Hendricks Club or Tammany? It is fairly axiomatic that the able men in any business or profession know the limitations of their own attainments and do not rush into other fields of action than their own, while the inconsequent guessers of the world are always writing to the papers. The Park Avenue Viaduct looks well in the drawings at small scale, being well proportioned. In reality it has the crudity of raw iron which should never be exposed excepting in grilles or balustrades, or finely detached columnar forms. The Coppice, Cookham Dene, Berkshire, England, has the charm of proportions and association with its environment which is so constant in English small house work.

(From "The Architectural Forum")



House of George M. Allen, Esq., Morristown, N. J.
Charles I. Berg, Architect

The Journal of the American Institute of Architects for December contains little of any permanent value, excepting Georgianna Goddard King's

(From "The Architectural Forum")



House of George M. Allen, Esq., Morristown, N. J.
Charles I. Berg, Architect

(From "The Architectural Forum")



Patio, State Normal School, Santa Barbara, Cal.
California State Bureau of Architecture

third article on "Early Churches in Spain, Toro and Zamora."

The Architect and Engineer of California, February, has plates of Allison & Allison's Union High School, Palo Alto. It is interestingly planned with picturesque masses, well proportioned—an artistically studied solution of utilitarian conditions, in which these conditions are much better fulfilled than in the standardized commonplace types in use throughout the country. The effect is now somewhat dry, but only requires age to soften it. Mr. Fitzpatrick, in "More Constructive Criticism," says perhaps he is a scold. We would not go as far as that, we think he is only setting up "Aunt Sallys" and shying sticks at them. No two men agree on all subjects but most men agree on some fundamental facts. Why not agree that architecture is utilitarian structure beautified; that for the protection of man the structure is all that is necessary; that the engineer and the contractor are all that are necessary, and in the eyes of many people nothing else is needed. Let it go at that and be content with those conditions as far as they go. But if there be at present, as there always has been, a desire for a plus quantity to be added to the mere filling of physical needs in the lives of men; if beauty, expression and distinction have value; if there be things now as there always have been, that transcend utility; if it is true today that "man does not live by bread alone," then the architect is rarer than the others, as sculp-

(From "The American Architect")



House of Allan S. Lehman, Tarrytown, N. Y.
John Russell Pope, Architect

tors and painters are rarer than the makers of bobbins and whitewashers, and being rarer are less intimate with the multitude, not from desire, but from difference. Mr. Mullgardt writes of a proposed soldiers' memorial for San Francisco. We only desire to suggest one or two things which have occurred to us in reading his paper. His memorial is to contain five principal elements: First a library of war records, second a hall of war illustrations, third an art gallery of war pictures, fourth an assembly hall for war moving pictures, and fifth a hall for war lectures. Why? First, the library will be taken care of in the Congressional Library and sufficiently in public libraries. Second, the same will happen in regard to war illustrations. Fourth, moving pictures will be in every town in the country until people tire of them. Fifth, with war lectures it will be the same. There remains only the war art museum for war paintings, than which there can be conceived nothing which will sooner grow stale. There were three great war painters of the Franco-Prussian war of 1871—Meissonier, De Neuville and Berne-Bellecour. Their works were engraved, photographed and copied. Can Mr. Mullgardt tell us where they now are? Some in private collections, some in Luxembourg. Yet at one time they were collected as war pictures. As a matter of fact, war pictures are illustrations, not masterpieces, and, therefore, the war picture museum seems unnecessary. Also people do not wish to sup on horrors, nor are they interested in topography. We feel that a memorial of this type would duplicate effort and would lose value as time went on.

In the *Architectural Forum,* December, Mr. Adrian Bentley writes in regard to the Tudor residence of George Marshall Allen, Esq., at Morristown, N. J., by Mr. Charles I. Berg. This is a stylistic house, desired by the client and suggested by Compton Wynyates, Warwickshire, England. Tudor architecture is rational and easily adapted to express a great variety of requirements in size and character of rooms, is capable of formality or picturesqueness and is extremely well fitted for domestic urban or suburban work. It is not so much a style as a manner, and it is an excellent manner. Mr. Berg's work has charm, texture and dignity, and the house is eminently livable and well designed. The interiors are especially attractive.

Bertram Grosvenor Goodhue's house for Cavour Hartley, Esq., at Duluth, is simple and good. "Recent Schoolhouses in California," second article, is illustrated with good examples. Trowbridge & Livingston's designs for the "Housing Development at New Brunswick, N. J., for the U. S. Housing Corporation," show the advantage of employing able architects upon this type of work.

(From "The American Architect")



"Furness House," Baltimore, Md.
Edward Hughes Glidden, Architect

The American Architect, February 5th. In the house of Allan S. Lehman, Esq., Tarrytown, New York, Mr. John Russell Pope shows the versatility of his

(From "Good Furniture")



Room in the Davanzati Palace

genius. This is a brick and half-timbered house of English character, and it is admirably true to type and evidences the careful study and intimate appreciation always apparent in the work of this architect—work which possesses the distinction that is the final touch in architectural design, and necessary to the creation in a work of art.

Columbia University proposes psychological tests for applicants. If we believed more in the psychological value of the usual examiners in such tests, we would be more enamoured with the idea.

(From "The Architectural Forum")



House for Cavour Hartley, Duluth, Minn.
Bertram Grosvenor Goodhue, Architect

The American Architect, February 12th—More Housing and Yet More Housing. Fortunately the subject is becoming more attenuated, and other subjects are appearing. In this number we have the Westinghouse Village in South Philadelphia, Pa., by Clarence Wilson Baker with the assistance of Mr. Robb, who made the sketches illustrated, the result is attractive. "Undoubtedly the first important movement towards the resumption of our normal building conditions will result from a well directed leadership on the part of the various agencies of the Government." This is a quotation from the editorial page. Good—but when has this ever occurred? "A Coming Extension of Architectural Service" has been handled in England for a long time past by the "clerk of works." It has minor faults, but, on the whole, is the best solution thus far offered, although, of course, it is no new idea. Furness House, Baltimore, by Edward Hughes Glidden, is of the Adam Georgian type, and like that type, thin, a little demure, but proper and eminently good.

The American Architect, February 19th, opens with a Civic Type of War Memorial, rapidly sketched by Mr. Frank Chouteau Brown, and frankly only suggestive. It is ambitious beyond the opportunities of any excepting very large cities, and incorporates ideas which would require expensive maintenance. However, it is worthy of consideration.

Good Furniture for January has excellent articles, well illustrated, upon Inter-period Furnishing, by Edward Stratton Holloway; Spanish Furniture, by William Laurel Harris; Antiqueing by Howard Dwight Smith.

The Architectural Record, February, is largely devoted to the home of Major J. H. H. Peshine, Santa Barbara, California, by Myron Hunt. It is extremely simple, even austere—is very good in its way, well proportioned. The sketches for the interior of the chapel are excellent. Mr. Cram writes on war memorials, and, being like the writer, a member of a committee upon one of these memorials, he has to indulge in generalities. He does, however, suggest replicas of destroyed monuments in France. This seems to us a little exotic and expositional, but it is better than many of the suggestions now rife. The Government's Housing at Bridgeport, Connecticut, is of excellent character—in keeping with the Colonial work in the town and well arranged. Colonial doorways in New York by Mr. John di Mariano are well selected and very well drawn. Modern Industrial Plants, Part IV, by Mr. George C. Nimmons continues to prove that in his hands these plants can be made to have an attractive character, without diminishing the utilitarian value, or causing appreciable increase in cost.

(From "The Architectural Record")



Utilitarian Design for Building Shown Below, Made for Comparison

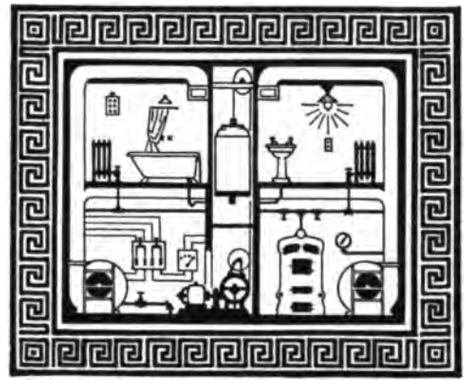
(From "The Architectural Record")



Building for C. P. Kimball Co., Chicago, Ill.
George C. Nimmons, Architect

EQUIPMENT

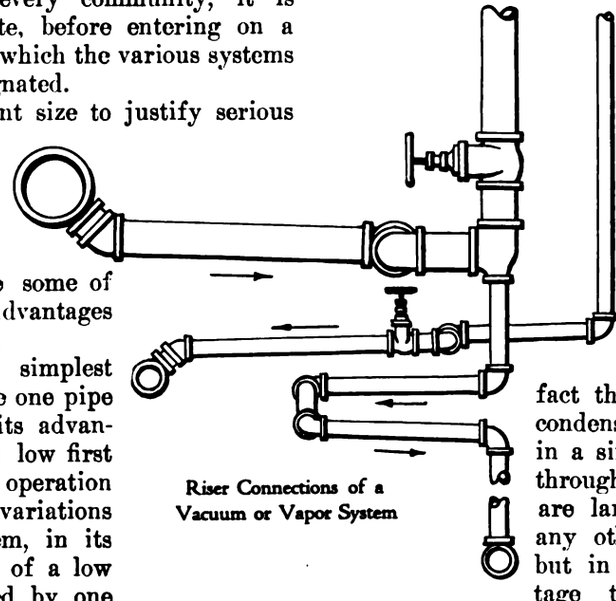
DEPARTMENT EDITED BY J. F. MUSSELMAN



SYSTEMS OF HEATING

ON ACCOUNT of the lack of uniformity in heating terms and a certain patois of the heating profession and trade, which has become so provincialized as to be almost a distinct language for every community, it is almost necessary to state, before entering on a discussion, the names by which the various systems and parts are to be designated.

A building of sufficient size to justify serious study of its heating plant may be heated in a number of different ways and each way may have some advantages worth considering while some of the ways will have disadvantages that cannot be overcome.



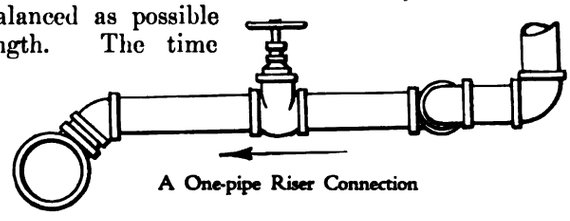
Riser Connections of a Vacuum or Vapor System

Beginning with the simplest and cheapest method, the one pipe steam heating system; its advantages in addition to its low first cost are simplicity of operation and quick response to variations in demand. This system, in its simplest form, consists of a low pressure boiler connected by one or more horizontal continuous main, looping around the building or sections of the building, and re-entering to the bottom of the boiler. The steam mains must, of course, be well above the water line of the boiler and below all radiators. The steam main is of the same size throughout its length and is graded slightly (.05 inches per foot) in the direction of flow of steam. With such a system the branch connections are taken off the top of the main as indicated by the cut, and are graded steeply up from the main, allowing the condensation to flow in the opposite direction from the steam and in the same pipe.

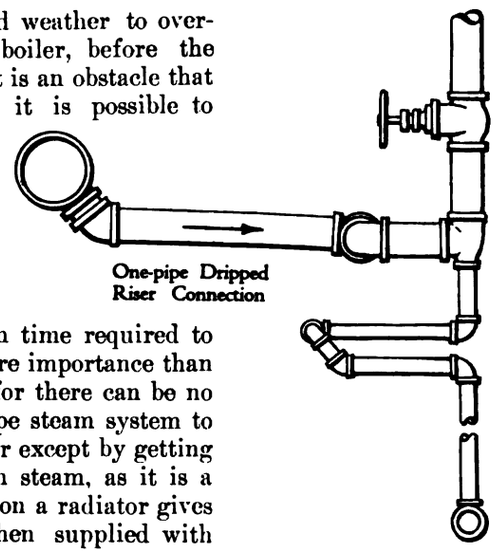
On account of the fact that the steam and the condensation are both carried in a single pipe, the pipe sizes throughout a one line system are larger than required by any other system of heating, but in spite of this disadvantage the smaller number of mains and fewer connections involved in such a system reduce the labor, and, in fact, the total cost below that of any other practical system of

heating a building of moderate size. For a very large building, however, this is not the case; the mains and connections become unwieldly and occupy more space and cost more than the two or three pipes of a vacuum system.

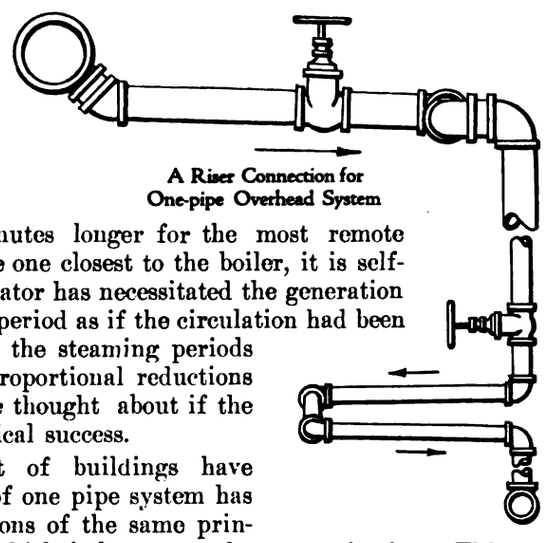
In laying out a system of this kind it is of the utmost importance to have all mains as short as possible and as nearly balanced as possible both as to load and length. The time required for the steam to travel from the boiler to the last radiator at the end of a long main is considerable, especially at low pressures, and this has a tendency in mild weather to overheat the rooms closest to the boiler, before the more remote rooms are warm. It is an obstacle that is difficult to overcome unless it is possible to locate the boiler plant very near to the center of the building; otherwise the longer mains have to be increased in size to equalize the friction losses. This point of minimum difference in time required to heat different radiators is of more importance than it would, at first glance, seem for there can be no general adjustment of a one pipe steam system to correspond to changes in weather except by getting up and completely letting down steam, as it is a fact that with a proper circulation a radiator gives off practically no more heat when supplied with steam at ten pounds pressure than when supplied at one pound. If on a mild winter day a room can be adequately heated by having its radiator hot for 20 minutes out of every hour and it requires 20 minutes longer for the most remote radiator to heat than for the one closest to the boiler, it is self-evident that this remote radiator has necessitated the generation of steam for twice as long a period as if the circulation had been uniform. The extension of the steaming periods is accompanied by almost proportional reductions in the coal pile and must be thought about if the building is to be an economical success.



A One-pipe Riser Connection



One-pipe Dripped Riser Connection



A Riser Connection for One-pipe Overhead System

As the size and height of buildings have increased, the simple form of one pipe system has given way to other adaptations of the same principle, the most common of which is known as the one pipe drip back system using the one pipe riser and one pipe radiator connection, but with each riser taken out of the bottom of the main and pitched in the direction of flow with a drip to a low or "wet" return main at the base of the riser. This arrangement makes it possible to reduce the size of the steam mains as connections are taken off and improves to a degree the rapidity of circulation. When properly designed, a system of this kind is quick, noiseless and low in first cost. It is probably more extensively used than any other system of heating.

Another form of one pipe system that has decided merit where the construction of the building permits, is the one pipe overhead system with which the steam is carried up through a single pipe and distributed at the top of the building with one pipe down feed risers which discharge their condensation into a wet return main. This is another way of reducing to a minimum the number of pipes in which a contrary flow of steam and water occur.

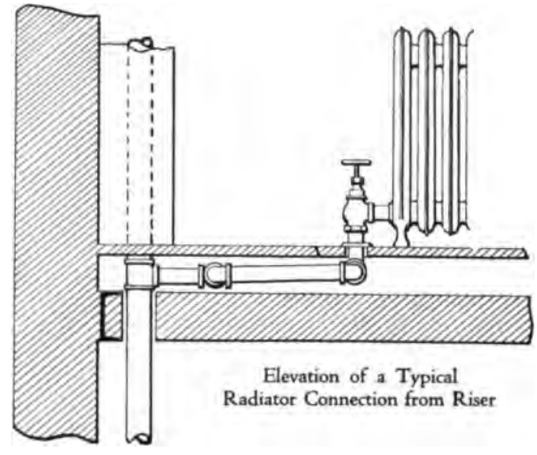
The two pipe steam system in the usual form, so common twenty years ago, is no longer with us and it may be said in the light of recent developments in heating designs that there was never any real reason for its existence. It had approximately all the disadvantages of all other systems and no advantage that was distinctly its own.

From the two pipe systems, however, the vacuum return system was developed which has proved its usefulness and has outlived the many misapplications created by too-active selling organizations. This system has a large and legitimate field in connection with the use of exhaust steam for heating where each ounce of reduction of pressure necessary on the steam mains means

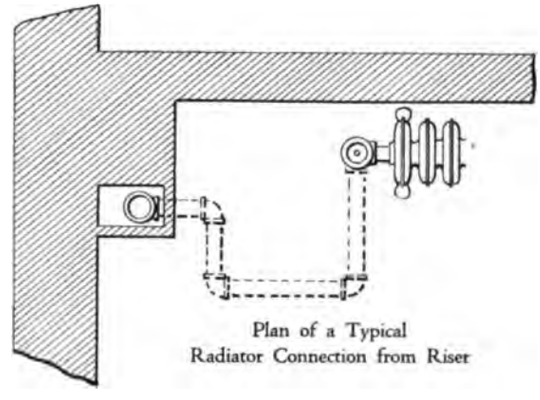
a substantial reduction in the steam consumption of the engines, a fact worth considering.

The first principle of the vacuum return system consists in handling the water of condensation and air through a single return pipe by means of a vacuum on the terminus of the return piping. This reduces the pressure required on the steam and obviates the necessity of air valves but it introduces a return trap or valve on each heating unit, the object of which is to allow the condensation and air to pass and at the same time prevent the passage of steam. These return valves, or traps, were at first most unreliable and passed through innumerable stages of development before reaching their present state of comparative perfection.

Insomuch as there is no especial gain by carrying an extremely low pressure on an ordinary isolated heating plant, the vacuum feature of the vacuum return system is now usually omitted and the same general design is used for gravity operation with a special device at the boiler for separating the air from the water, and returning the latter into the boiler.



Elevation of a Typical Radiator Connection from Riser

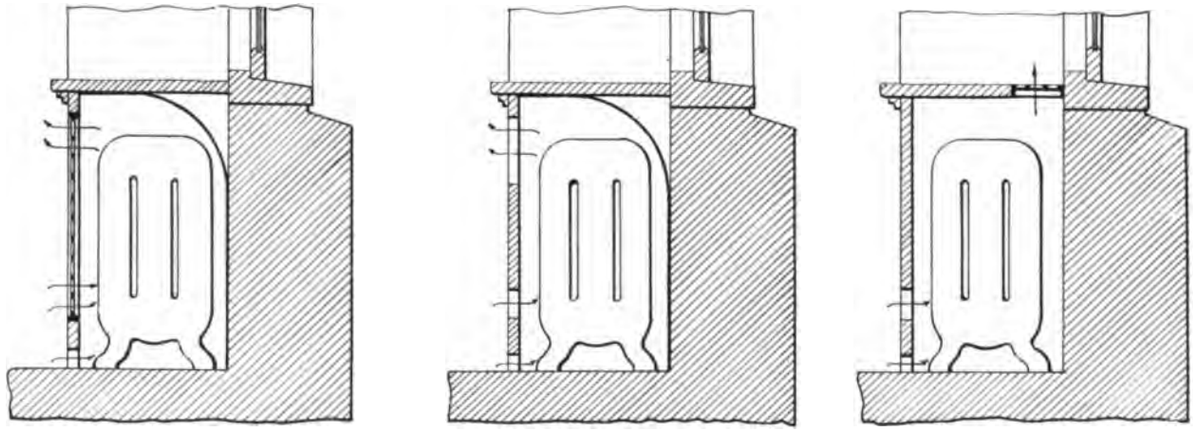


Plan of a Typical Radiator Connection from Riser

By properly proportioning all pipes of this last described system and by placing the supply valves at the top of the radiators, the pressure required to circulate is very low, rarely more than one pound, while a very satisfactory heat can be maintained with nothing more than a vapor. On this principle the vapor systems and modulating systems have been developed which have introduced a method of throttling down the flow of steam to each heating unit, making it possible to control to a certain extent the average temperature of the individual radiators.

This system of gravity modulation deserves a good name and popularity. It is generally well thought of in spite of the fact that some of the supply valves and return fittings have been badly designed and have given much trouble in maintenance.

A modulating supply valve, in order to give satisfactory service must, first of all, modulate, and it is safe to say that not fifty per cent. of the valves sold for the purpose will actually effect a graduated control of the heating surface in anything the proportions indicated on the dial of the valve even with a uniform steam pressure.



Radiator Enclosures

Many of them cannot be depended upon to completely shut off the radiator and others give endless trouble by binding and becoming stiff and difficult to operate. All of these difficulties have been brought about by an attempt to produce too cheap a device with too little metal and corrosive operating parts.

The return valve and devices, too, are still in the process of improvement and many have been extensively used before their defects were discovered. The function of the return device is to allow water and air to pass without allowing steam to pass and they are effective in inverse proportion to the amount of steam which they allow to enter the return system. This is true not only on account of the fact that such steam is wasted, but also because any considerable amount of steam in the return system is apt to attack from the rear and upset the circulation of other parts of the system by closing off innocent return valves and air-binding other radiators.

The amount of fuel saved by the use of a modulating system is worthy of consideration and as a rule justifies its additional cost. It is not, however, as great as is often claimed and depends largely on the extent to which the individual occupants of the heated rooms are willing to make use of the ability to regulate the heat of the radiators by the operation of the control valves.

The ability to control the temperature of the heating medium from the point at which the heat is generated is the most vital object to be attained in a heating plant, both from the point of view of comfort in the heated rooms and from the standpoint of coal conservation. With steam, however it is laid out, and however it may be operated, this cannot be done satisfactorily. With hot water, either under forced circulation or gravity circulation, it is accomplished easily. For this reason it may be said that the most perfect method of heating that has been developed at this time is the two pipe hot water system. It is, of course, not usable in very high buildings on account of the static pressure of the water, and it has other disadvantages such as high first cost on account of the additional amount of radiators required, and the remote but ever present possibilities of freezing up; but all things considered it is worth while more often than it is used.

Whatever the system of heating may be, the question of expansion and contraction of pipes is troublesome. This is especially so in the question of riser pipes in high buildings where the branches from the risers are concealed in the floor fill. In buildings of twelve stories in height and less it is usually considered unnecessary to provide expansion loops or joints in the risers, as it is altogether feasible to provide sufficient flexibility in the branches to take up the vertical movement of the riser provided the riser is anchored at the center of its height. But in providing the space for the movement of the branches it must be remembered that the riser expands about 1½″ per hundred feet of length; the branches, especially in one pipe work, must have same pitch and pipe cannot be fitted with micrometric accuracy, all of which adds up to more than 3 inches from beams to finished floor.

On the subject of comparative unsightliness of exposed radiators and radiator enclosures, volumes might be written but the architects and housewives have won and it behooves the heating engineers to make the best of it and go on enclosing radiators as well as possible, forgetting that it takes more radiating surface and costs more and forms unsanitary dust pockets that cannot be cleaned out.

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912,

Of THE ARCHITECTURAL REVIEW, published monthly at New York, N. Y., for April 1, 1919.

State of New York, } ss.,
County of New York, }

Before me, a Notary Public, in and for the State and county aforesaid, personally appeared Clarence H. Peters, who, having been duly sworn according to law, deposes and says that he is the Business Manager of THE ARCHITECTURAL REVIEW, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 443, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

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CLARENCE H. PETERS,
Business Manager.

Sworn to and subscribed before me this 11th day of April, 1919.

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EDITORIAL COMMENT ON ARCHITECTURE & THE TIMES

THE relation of the industrial arts, especially those pertaining to interior decoration and furnishing, to architecture, is becoming widely recognized, and the importance of good design in this field is being impressed upon manufacturers. This should ultimately make available a much wider range of decorative materials and furniture of good design.

Practical help is being given to manufacturers and to employees in the art industries by many agencies, among the most important of which are the art museums. The work of the Metropolitan Museum of Art is particularly notable in this respect, for not only do the collections of this museum contain a very large amount of the kind of material most helpful to the designer and the manufacturer in these branches but the collections are made of the greatest possible use through the facilities for study which the museum provides. Its textile study room makes available the ten thousand samples of its collection of textile designs. The examples embraced under the general title of decorative arts, numbering 50,000, also leaflets, its lending collections and its docent service and course of public lectures are all helpful. There is also a special department in charge of an experienced chief whose office it is to make the collections directly accessible, to assist in the finding of suggestions, to recommend developments of designs and to help the designer make use of the finest things of all times for the greater good of American design.

ANNOUNCEMENT has been made that the calling of a National conference of men concerned with the construction industry, representing manufactures, distributors, consumers, labor, agriculture, transportation and finance, is being considered by the board of directors of The National Federation of Construction Industries.

The purpose of the proposed conference is to bring together representatives of all the parties directly or indirectly interested in the construction industry in order that they may come to an understanding relative to the new economic conditions with which we are now confronted.

It appears that the condition is one of psychology rather than of material. It is pointed out that labor is available, money is at hand, material is abundant and the need for construction is pressing. In spite of the fact that all of the elements necessary for active business are present, the construction industry has not promptly resumed activity on a proper scale. This is unquestionably due to the fact that many people believe that there will be a reversion to pre-war prices, and are apparently postponing construction until the hoped for reduction in prices occurs.

As is well recognized by men who have studied the subject independently from different angles there is every reason to believe that the prices of labor and materials involved in the construction industry will not recede to any extent if at all in the near future and that we are in all probability on a permanently higher level of prices than we were before the war.

It is pointed out that the increase in prices in the United States during the recent war has been much less than in other countries, excepting Australia and New Zealand, and that not only in Germany and Austria but in the neutral states of Europe and among the Allies prices have advanced in many cases far beyond those now prevailing in this country.

Our gold reserve has been greatly increased but the service or supply of goods to be exchanged for it has not been increased. As a result more money is required in both the purchase of labor and commodities than before the war brought about this economic condition. With a greatly increased gold reserve, having over seven hundred millions of dollars of free gold in this country, in addition to that required to meet legal requirements of our present banking system, and with the supply of commodities not equal to normal demand, prices, naturally, are not only higher than they were before the war but are practically certain to remain on the new high level.

It is with the purpose of disseminating information along these lines about the cause and practical certainty of a continuation of the present prices in the construction industry among all classes of men who are concerned either as consumers or producers that this conference is proposed.

It is expected that through this means the farmers, the workmen, and the business executives interested in construction, who jointly are the producers and consumers of the construction commodities, will by candid discussion and sincere examination of the views expressed by the others arrive at an understanding of the close interrelation between their business interest and the construction industry and get a grasp of the situation.

It is estimated that on account of delayed construction, from six hundred thousand to a million houses are needed immediately to meet the requirements of the people of this country. It is said that large sums of money have been appropriated for public improvements but that the officials responsible for the expenditure of these appropriations are in many cases hesitating to proceed with the work authorized.

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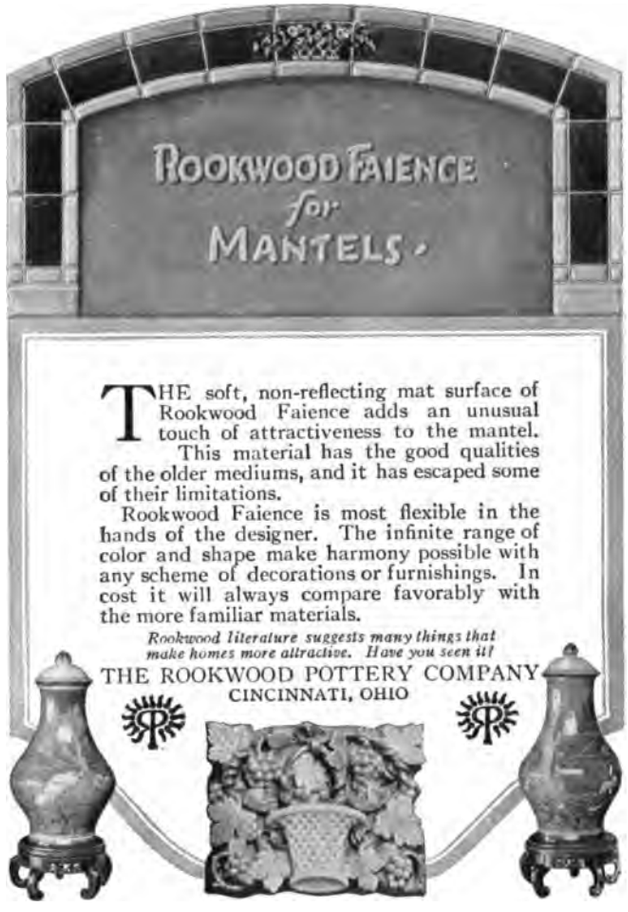
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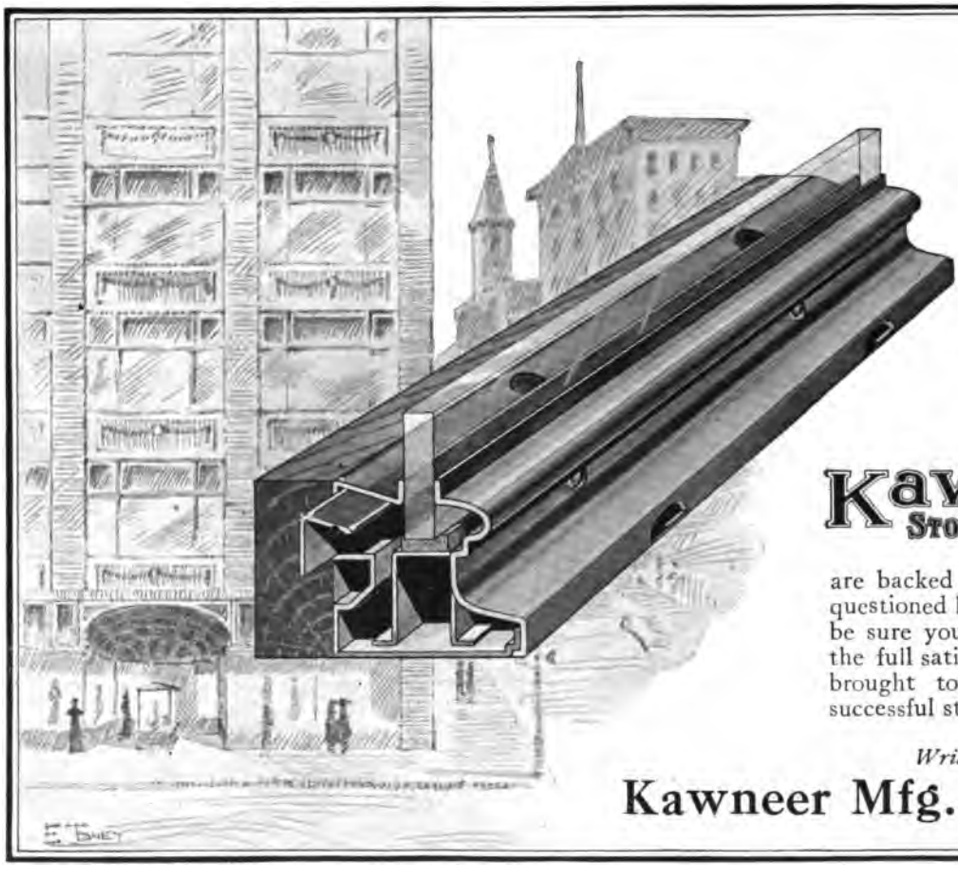
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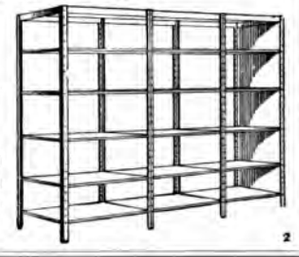


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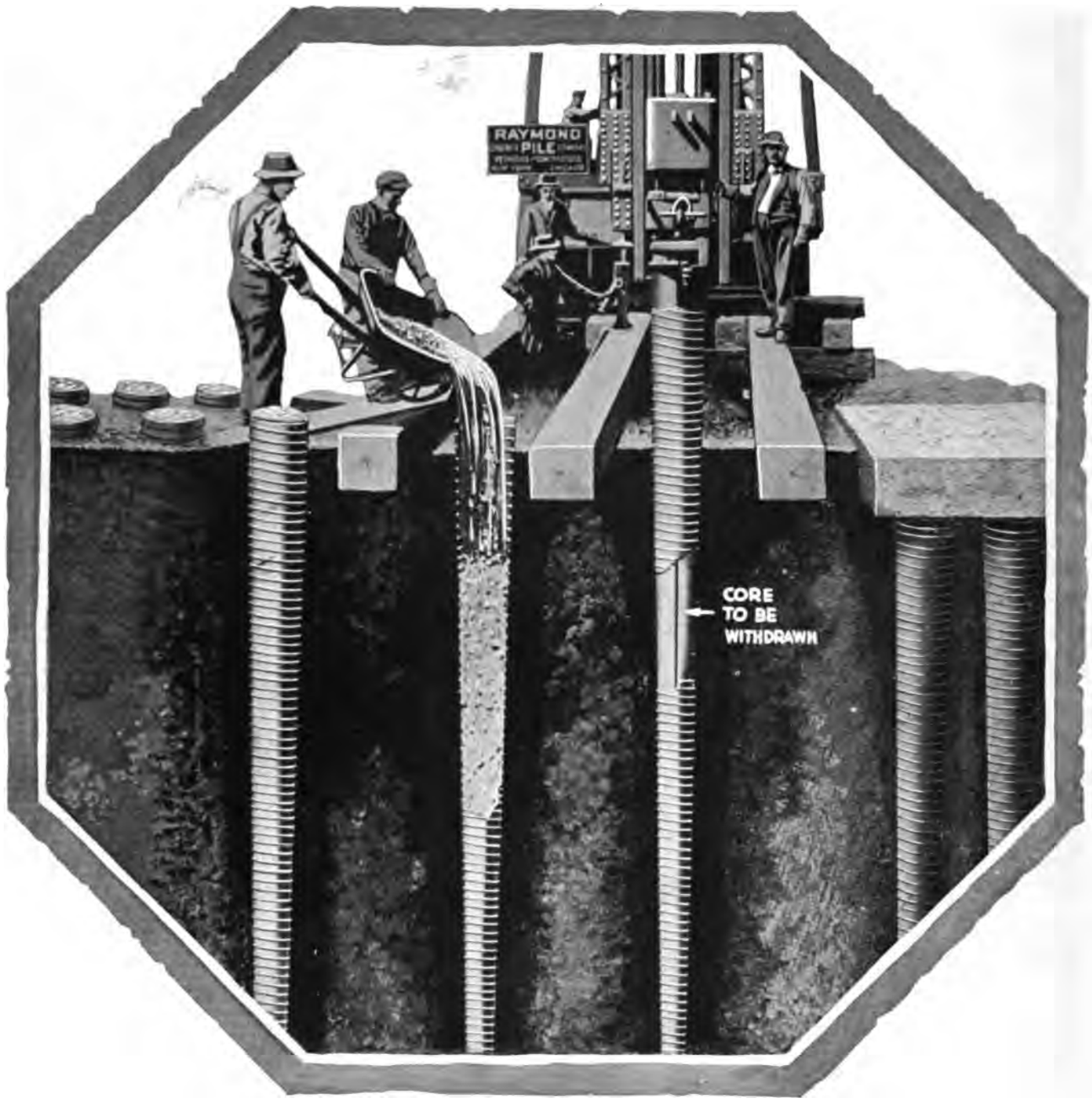
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VOL. VIII, No. 6 June, 1919

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FOLLOWING the established policy of presenting buildings of unusual interest and of monumental character from time to time with special thoroughness, THE ARCHITECTURAL REVIEW in this issue describes and illustrates the new Union Station of Richmond, Mr. John Russell Pope, architect.

The exterior and interior are shown by numerous photographs with the purpose of giving the reader as complete an impression as possible. These views show the building from all angles and in detail. They were taken specially for this magazine.

Through the courtesy of the architect, it has been possible to reproduce the working drawings from which this building was constructed, and the more important plans and sections are presented in the illustrations in the text and the set of two-color plates.



The Union Station, Richmond, Va.
John Russell Pope, Architect

The descriptive article is by Mr. Howard Dwight Smith, who gives an intimate account of the conditions that influenced the development of the design by the architect and shows how the practical requirements were met and given monumental architectural expression.

Additional interest attaches to this building because it was the principal feature of the exhibition of drawings and photographs of executed work by Mr. Pope, which was held recently at the Fine Arts Building, New York City, on the occasion of the annual dinner of the New York Chapter of the American Institute of Architects, when Mr. John Russell Pope was presented with the medal of honor awarded to him in recognition of his distinguished contributions to American architecture and his high professional standing.

The example of Mr. Pope's work which aroused the greatest amount of interest next to that which centered upon the new Union Station of Richmond was The Temple of the Scottish Rite, Washington, D. C., for which Mr. Pope received the gold medal awarded by the Architectural League shortly after its completion. The Temple of the Scottish Rite was made the subject of thorough illustrative treatment in the issue of THE ARCHITECTURAL REVIEW for January, 1916.

The regular departments; namely "The Review of Interiors," edited by Mr. J. H. Phillips, "The Review of Recent Architectural Magazines," by Mr. C. Howard Walker, and "Equipment," edited by Mr. J. F. Musselman, also appear in this issue. Mr. Phillips' department contains interesting illustrations.

IN THE JULY ISSUE

The issue of THE ARCHITECTURAL REVIEW *for July will contain articles describing and illustrating a notable solution of the city house problem, a country house with an interesting garden, a well-designed college building and an automobile showroom and office building. In addition, there will be the regular departments, "The Review of Interiors," "The Review of Recent Architectural Magazines," and "Equipment."*



MAIN ENTRANCE

UNION STATION, RICHMOND, VA.

JOHN RUSSELL POPE, ARCHITECT

The
ARCHITECTURAL REVIEW
Volume VIII | Old Series Vol. XXV JUNE· 1919 | Number 6

THE NEW UNION PASSENGER STATION AT RICHMOND, VA.

JOHN RUSSELL POPE, ARCHITECT

By HOWARD DWIGHT SMITH

THE consideration of railroad stations is but one of a long and varied list of things which engage the time and energy of those interested in the management and maintenance of our great systems of transportation. The American Railway Engineering Association, for example, a society of business men and engineers as well organized as any of our best corporations and whose parts function as smoothly as a delicate machine, has nineteen standing committees, each of which is delegated from year to year to study and investigate some particular item of continual vital interest in railway management. This list of committees does not deal with special problems or subjects but covers such items as roadways, ballast, records and accounts, rules and organization, economics of railway location, electricity, etc., etc.*

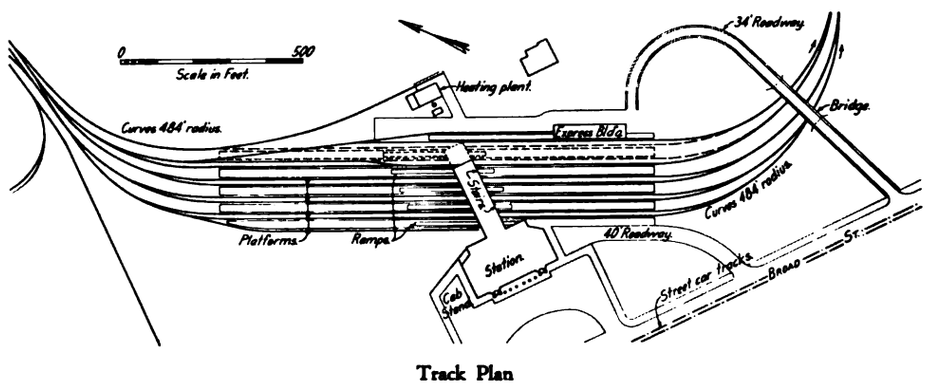
One of these nineteen committees has to do with yards and terminals, and it is under this head that this association studies the problems of railroad stations. If we assume that this committee's energy is about evenly divided between the two subjects, and that all nineteen committees are of equal importance, we may deduce that stations themselves represent about 2½ per cent. of the sum total of the interest of railroad management and maintenance.

The minuteness and care with which these committees study and report to the organization, however, is quite in keeping with the character of the organization as a whole, and emphasizes the importance of the items under consideration.

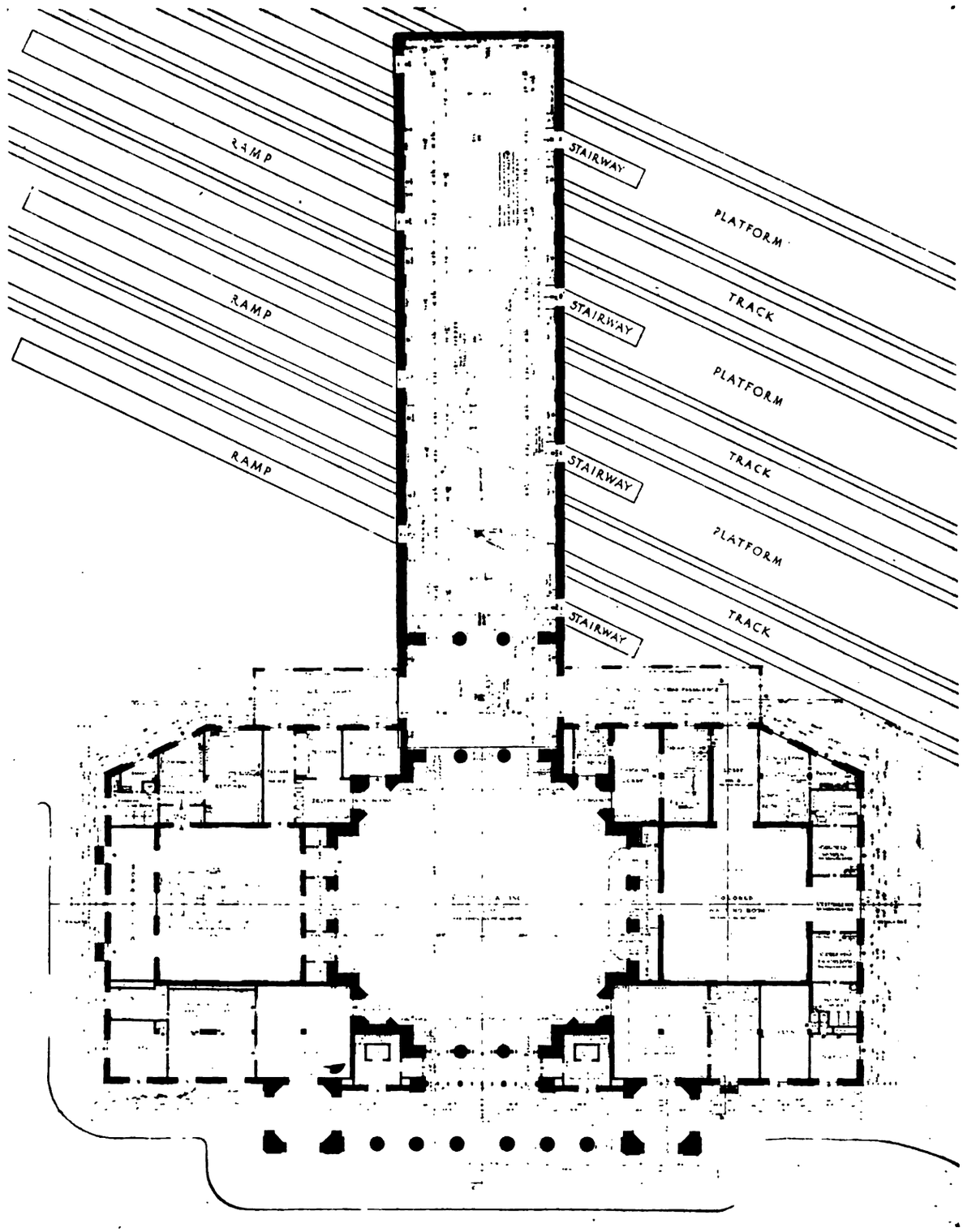
The importance of railroad stations and terminals in railway systems was, however, in a way, primarily pressed upon the railroads by public opinion. Referring to the report of the Committee on Yards and Terminals, of the above mentioned association, as far back as February, 1910, we find this paragraph:

"Attention may be called to the fact that there is a growing demand on the part of the

* *See Monthly Bulletin of the American Railway Engineering Association, 900 S. Michigan Ave., Chicago, Ill.*



Track Plan



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UNION STATION, RICHMOND, VA.

JOHN RUSSELL POPE, ARCHITECT

public for new passenger stations of the most modern type and this applies to small towns as well as larger cities. In the aggregate these demands are enormous. It is very generally assumed that this will benefit the railways; but, as a matter of fact, the expenditure returns no revenue and involves increased annual expense for maintenance. It is, therefore, economy to use existing facilities as long as they will handle the business, but a few hundreds or thousands of dollars spent judiciously in improvements that will facilitate the handling of business or *will benefit or appeal to the public convenience and comfort*† may be a wise investment. These improvements would apply especially to the track layout connecting the main line approach with the station tracks, also the ventilation, lighting and particularly the sanitation of the station. Some new stations have been criticised on the ground that they have been made excessively expensive by unnecessarily elaborate architectural and decorative features."



General View

This report of nearly a decade ago is quoted at such length to show that even in the high places in railway management the idea of more or less elegant stations came hard. But the average railroad man of experience is a good business man and when the idea of good stations became fully absorbed its practicability and advisability became apparent. This conclusion is to the credit of the railway business men. It is quite in line with the change from that old, oft-quoted maxim to the newer and more pleasant one, "the public be pleased."

†*The italics are the author's.*

Public opinion insisted on good railroad stations and in supplying that demand the railway officials have found that money so spent has been most profitably invested. As a rule the public mind is not consciously interested in the style or the architecture of a station from an æsthetic point of view. Convenience and consideration, even to the point of luxury, however, it does demand. Neither, as a rule, are the railroad men primarily interested in the style or architecture of their stations from the æsthetic point of view. They are interested in the maximum of convenience for the minimum original outlay and, above all, are they interested in low cost of maintenance.

With this in mind let us look at some of the accompanying illustrations of the new passenger station at Richmond. Is the public interested in the fact that the dominating architectural feature of this building is a huge dome of classic proportions? Or, on the other hand, is the railway official interested in that fact? On first thought, apparently they are not. A classic dome has seldom, if ever before, been built over a railroad station. But that is no argument for or against it. A kind lady is said once to have criticised one of the artist Turner's paintings of a Venetian scene having a vivid yellow sky—"but, Mr. Turner, I've never seen such a sky as that," to which the artist's reply was, "Well, madame, would you not like to?"

On second thought, and on more than casual analysis we must conclude that, even though neither the public nor the railroad man has seen a dome built over a railroad station, they are vitally



Exterior of Concourse

interested in this particular dome, for it is the outward or architectural expression of just those things with which they are both concerned. For the public there is contained beneath and within that dome all the conveniences which it demands and desires, with a luxurious spaciousness which leaves little to be wish for. Here within this central feature, disposed so as to be of the most convenience to the traveller, are the information desk, the ticket office, and baggage facilities following on the right from the entrance in the sequence mentioned, leading to the concourse which is always the ultimate objective. To the left are accessories of public convenience and accommodation which the public demand, and the entire central floor area is used as waiting room and is provided with seats. Here are these things which the public wants grouped about one central point under the dome, with not a foot of space wasted. The dome then becomes the expression of the economy of the plan, and is therefore of a certain interest to the railroad man.



Stairs to Train Platforms

But this is a little ahead of the story, for the Richmond station itself is a part of a big scheme of things which ought to be briefly discussed in order to get the chronology straight. To the company official and the business man the success of the station depends upon the efficiency with which it plays its part in the big scheme, involving the questions of how the trains get in, how the people get out, how the express and baggage are handled and what becomes of the engines, etc.

For a number of years the city of Richmond has been

served with inadequate union passenger station facilities at Byrd Street in the heart of the business district along the James River. This old Union Station, used jointly by the Atlantic Coast Line and the Richmond, Fredericksburg and Potomac Railroad was located so as to be incapable of expansion on account of the encroachment of business and industrial interests on adjoining property. The station itself, although serving as a through station, was of the stub-end type and so short were the stub-end tracks that not more than six cars could be accommodated on each one at a time. As the through train service from points south of Richmond increased, as it has during the past decades, the sixteen-car and eighteen-car trains had to be broken up into three sections to get into the station.



Detail of Pavilion of Entrance Portico

Grade crossings were numerous and a portion of the tracking within the city was along the center of important thoroughfares. To overcome these objections and to reduce maintenance costs the Richmond Terminal Railway Co. was formally organized in 1916 to crystallize efforts which had occupied several years previous in developing, with a view to effecting a complete new scheme for passenger service in the city.

The "previous efforts" just referred to had taken the form of detailed study by engineers employed by the Atlantic Coast Line to determine the most economical location of new tracking and a layout for the new terminal with its yards and service facilities. As far back as 1914 a competition was held to choose an architect for the building itself, but the radical changes of route which were proposed by the engineers of the city naturally aroused comment and interest, real estate and otherwise, to such a point that outward activity ceased for a while.

This is not a place to discuss the question of the advisability of choosing architects for railroad stations by competition. But the following statement of facts in connection with the history of this station may be of passing interest. In the original competition were three architects of recognized ability. The award was made and the designs made public, and then followed the period of dormancy which has just been mentioned. It was during this period that there was built in another state and for another railroad, a station whose external appearance, general scheme and composition suggest the appropriation of the design upon which the Richmond award had been made. In due course of time the need for the proposed improvement became so great that work had to begin both on the track and yard layout, as well as the station building.

But the time between the judging of the competition for the selection of the architect for the station and the time of the actual organization of the Richmond Terminal Railway Co. was far from lost. In fact, it made possible a certain period of informal acquaintanceship between engineer and architect which has proven beneficial in the execution of the problem. So it was during this period of nascency that the architect was permitted to see and to understand and to advise on the large features of the scheme which was being developed and to realize from the inside, as it were, just what the conditions were which were



ENTRANCE PORTICO
UNION STATION, RICHMOND, VA.
JOHN RUSSELL POPE, ARCHITECT

to call for his services as an architect. He was sympathetic to the choice of the proposed site in the western end of the city in the newer residential section where it was still convenient of access to the hotels and the retail business districts. He understood the line of study followed by the engineers in solving the problem of developing a new line of passenger traffic in and about the city to make the new site available. He knew and understood the technical details of the loop system of track arrangement. The architect knew and understood all of these things because the railroad officials counselled with him.

It was during this period, too, that all the details of the track terminal and yard facilities were worked out in completion. The site of the new station is the property formerly occupied by the Hermitage Golf Club and the ball park of the Richmond Club of the International League. It is far enough remote from the main line of the two roads interested so that the loop layout referred to could be arranged to avoid all reverse movement of trains and engines, and to allow all trains to enter the loop from one direction. With trains in the station all headed one way, baggage is handled at one end of the platform only, and one of the hardest problems incident to the through station type is eliminated. With all these conditions well established and understood both by engineer and architect the problem of designing a station was approached with a decided advantage, for, once a problem is well defined it is half solved. Not the smallest part of the architectural problem hinged about the fact that the scheme and design originally approved by the railroad officials had in the meantime been used elsewhere. Apparently the architect considered that the measure of his service to his clients depended largely upon his ability to produce a simple but distinctive piece of architecture which would represent the expenditure and investment of an amount of money in physical plant where returns would be manifested in terms of public approval and of advertising value, not to say also of a certain amount of artistic satisfaction.



View in the Portico

Perhaps it was in trying to overcome this handicap that the dome scheme for the station was evolved and the architect was spurred to the boldness to use such a motive. The motive itself is staid and classic and conservative, as much so as is its noble predecessor, the dome over the reading room of the Columbia University Library.

Aside from the distinctiveness of this new use of a dome, Mr. Pope has not gone far from the beaten path of railroad station architecture in the exterior dress of the building. The huge ter-



Detail of End Pavilion of Portico

minals of the Pennsylvania Railroad in New York and the Union Station at Washington have created an appropriate and pleasing spirit by the use of monumental Roman motives, which are echoed here in a smaller building, but in an equally forceful fashion. Some one has said that the exterior of a certain great railroad station is so Roman in appearance and feeling that one might expect to see a band of gladiators, armed with short stubby swords, emerge from the portico. The lay mind does not usually make such archæological associations and it is perhaps not so much of an anachronism after all to use the heavy and sturdy structural forms of the Cæsars to assist us in the architectural expression of so great a thing as an American railway.

On this premise, the choice of scale and detail of the exterior of the Richmond station has been very conservatively classic. The care with which scale has been maintained may be realized when one compares the thirty-two-foot Doric columns of the front portico of the Richmond station with those of the Pennsylvania station, which are thirty-eight feet high (column only), or with the attached Ionic columns of the Washington station, which approximate fifty feet in the center motive and forty feet on the open end pavilions.

Every advantage has been taken of the possibilities of the location. The placing of the waiting room floor level some eight feet above the grade of Broad Street has done two things. First, for the engineer it has permitted, without excessive excavation, the arrangement of track grades so as to eliminate curve and grade resistance for starting trains and to facilitate departure. Second, for the architect it has given an eminence to the building which lends height to the composition. This is particularly true to the relation which exists between the mass, the dome and the structure surrounding it below.

On the straight front elevation drawing the dome appears excessively towering and the great semicircles of glass area dwarf the portico and its end pavilions. The eminence of the building level

happily overcomes this from all viewpoints along the main thoroughfares and from the gently sloping plaza which occupies the 200 feet of space between the portico and Broad Street.

The front of the building is 240 feet long and it is 118 feet deep, from front to rear. The material used on the exterior is Indiana limestone of that kind known as "American Travertine," a stone which resembles in beauty, interest and pleasing texture, the material of the classic examples which we are wont to study and simulate. The simple east and west wings are three stories high on the exterior, and on the interior courts each wing has an additional story, all of which above the ground story is used for railroad business offices.



The Clock and Inscription at End of Concourse

The only ornamentation on the building is that which is grouped about the large clock over the entrance portico, and the Roman panel reliefs beside the second story windows of the end pavilions of the portico. The allegorical figures in low relief on each side of the clock, representing "Progress" and "Industry," are by A. A. Weinman. The carved seals in the adjoining panels are those of the United States and the State of Virginia.

If the pleasing proportions and the clear-cut detail of the exterior of the station were its only "selling points" it would have its only appeal as a museum piece, to be looked at and not used. Its plan has been alluded to in a general way as being appropriately expressed by the exterior and as being developed around that successful expedient of making one feature of the building predominant in plan as well as elevation.

As far as plan goes, the program of requirements involved those features ordinarily required in a through passenger station, to wit:—a waiting room and a concourse, men's and women's rooms, ticket offices, baggage rooms, restaurant facilities and cab stand. But, being south of the Mason and Dixon line, the plan requirements were augmented by additional accommodations for colored travellers.

The entrance to the station is from the Broad Street plaza, through the six-column Doric portico and through a vestibule which occupies the space within the walls of one of the arches which support the dome, directly into the waiting room which has been designated for white travellers. From each end of the vestibule there are doors into the entrance



THE WAITING ROOM FROM THE CONCOURSE VESTIBULE

UNION STATION, RICHMOND, VA.

JOHN RUSSELL POPE, ARCHITECT

lobbies which give access by stairs and elevators to the office floors above. These lobbies also open onto the outside portico.

Too much emphasis cannot be placed upon the fact that in any railroad station, large or small, the sequence of three features within or immediately adjoining the waiting room, should be maintained. Information, tickets and baggage service are the things which a hurrying traveller must be accommodated with in his haste to the concourse, and if placed at his disposal in plain view as he approaches from the entrance, many of the inconveniences of station management are done away with. And what applies to the hurrying passenger with reference to these things applies equally well to the orderliness and satisfaction with which the casual and less hasty patrons may transact their business with the agents of our common carriers.

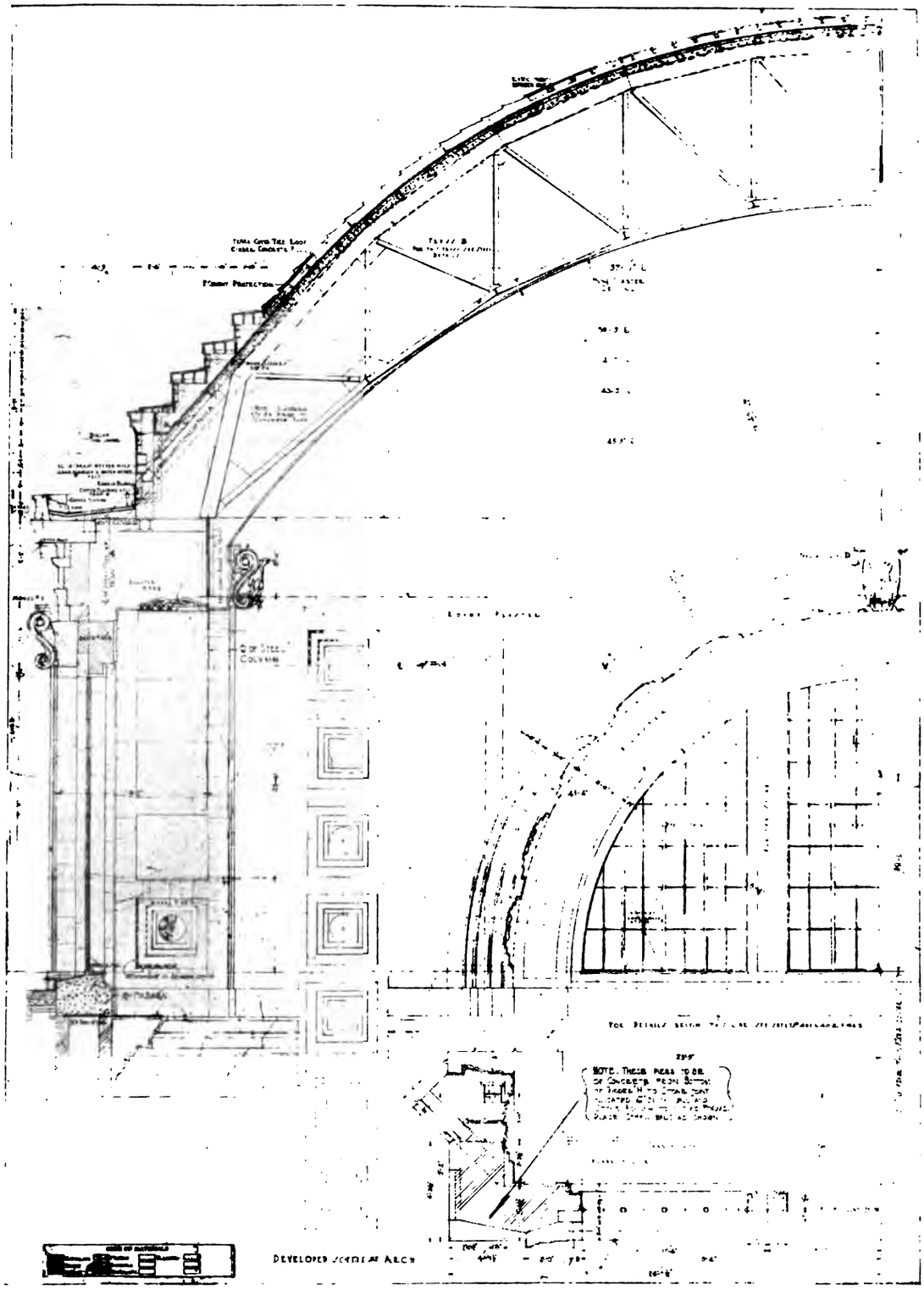


The Dining Room Alcove

The two minor waiting rooms for white travellers, that is to say, the women's room and the smoking room for men are placed at the front corners of the large waiting room with entrance doors inside the niches of the great corner piers which support the dome arches. Each of these rooms has an outside window opening on the open-end pavilion of the front portico.

Along the left or west side of the great waiting room, opposite to the "information, ticket and baggage" group just mentioned above, are the other important features of the station for the accommodation of the public. Beginning at the pier in the front corner there is the entrance to the men's room. This is followed by the entrance to the dining room, the news stand, the entrance to the lunch room, the telephone and telegraph room and a refreshment stand, the last named being an institution which does a great business in a dry State. Without attempt at witticism it may be mentioned that prohibition has made such a feature as a refreshment stand an important one, and one quite appropriately included in the list of plan elements which the architect has grouped about the great waiting room in his scheme of centralization in this station.

The interior of the domed waiting room is gray. The walls are of plain limestone ashlar with Napolean gray marble wainscoting to a height of ten feet. The dome ceiling is a plaster surface above four large stone arches and has four warped pendentives over the corner piers. The structure of the dome is steel supporting the masonry roof, and a discussion of the steel trusses used therein would make an article of no small size in itself. On the entrance side of the waiting room and the side toward the concourse the treatment consists of two simple Ionic columns supporting the cornice within the arches. The transition in scale from the Doric order of the front portico to the Ionic of the interior has been made by not using any columns whatever on the inside line of the portico, but filling the entire square space with glass and metal. This is also the logical thing to do in



INTERIOR AND SECTION THROUGH DOME
UNION STATION, RICHMOND, VA.
JOHN RUSSELL POPE, ARCHITECT



A Portion of the Dining Room

plan to avoid congestion at the outside of the vestibule, but the designer has laid himself open to criticism by the use of the long-span stone lintel with the semi-barrel vault ceiling of the portico above it. He has, however, followed the reasonable dictates of the plan and he has also frankly jointed the lintel and supported it on steel. This has not been necessary on the concourse side.

On the other two sides, over the information, ticket and baggage group on the right and the restaurant, news and telegraph group on the left, there are curtain walls within the arches to which are applied flat Ionic pilasters. The dome has no light from the top, but the room is lighted from the entrance side and by four semi-circular windows in the arches above the encircling cornice.



Corner Niche in Arch Pier

The floors are of terrazzo with marble slab borders. All of the doors and interior metal work, and the ticket grilles, which are executed in an excellent quality of cast iron, are painted a soft greenish gray. These greenish gray features and the dark stained benches give color to the lower part of the room, while overhead, suspended within the dome is the large lighting fixture, an illuminated globe upon which is traced the outline of the continents. This globe is some eight feet in

diameter and is held within a double horizontal ring of bronze which is ornamented with the signs of the zodiac. At night it is very effective, as the supporting chains are not visible from below and the softly luminous globe appears to float in space.

Restaurant service is an accommodation which the public has rightly demanded of the railroads, and the officials have found with this service as with so many services which in a way have been pressed on them, that it can be made both a source of income and a very satisfactory means of advertisement and publicity. This is quite as true of station restaurant service as of dining cars, a sort of lucrative by-product as it were. In the Richmond station, local experience and recent general experience have been considered in proportioning the space between lunch counter and table service.

Lunch counter service has proven so successful in connection with all stations, terminal as well as through, that it is given a decided preponderance of area. The space given to the restaurant is that portion of the floor at the right of the waiting room and below the court around which are located the offices of the upper floors. In order to avoid breaking up the restaurant area into several architectural units the table service has been separated only by a screen of painted iron and glass. The walls are of warm gray painted plaster above a low wainscoting of Tennessee gray marble.



View from the Concourse through the Waiting Room



West Pavilion of Portico

Occupying a similar position in the floor plan on the opposite side of the main waiting room is the waiting room for colored travellers. The South has learned that it makes for satisfaction, public convenience, and in the end for general economy as well, to provide adequate separate facilities for the colored travellers. In this station it has been the aim to have just the proper amount of consideration for this class. The general waiting room is a square, lighted from the court. It is separated from the large waiting room by the ticket office, which thus can serve both white and colored.

There are smaller separate rooms for the men and women, and a lunch room. A large portion of the east wing is thus given over to the accommodation of the colored people, and what is of particular significance, this wing is dignified by an entrance of its own on the east facade, sufficiently separated from the entrance portico, but not inconvenient in any way to the parts of the plan it is intended to serve. Egress from the colored waiting room to the train concourse is by way of a passage along the side of the station into the concourse vestibule.

The concourse vestibule becomes the sole point of control of the access to the concourse and the trains. This matter of a single control to trains has been found by railroad men to be of decided advantage in many ways, especially in through



Detail of Portico

stations, and is recommended by such authorities as the "Manual of the American Railway Engineering Association." Not the least of its advantages is the matter of maintenance.

The concourse vestibule in this station is also open to the west through an enclosed passageway to the cab stand which occupies the space to the west of the station building and north of the plaza. A passage from the dining room also connects with the concourse passage so that direct access may be had to the concourse vestibule from the plaza outside without going through the waiting room. The carriage entrance is thus located at the opposite end of the building from the entrance for colored travellers.

The concourse is a long gallery-like room built out over the seven existing tracks of the loop system. Externally the concourse building appears as a separate part of the building composition, but appropriately subordinated to the dome over the main part of the building. It is some 200 feet long and 54 feet wide and on the inside has plaster walls above a high wainscot of gray Tennessee marble. The plainness of these walls is relieved by the use of simple flat Ionic pilasters of a decorative nature. These pilasters used here and on the east and west walls of the main waiting room are examples of a method of treatment found also in the pilasters in the entrance gallery of the New York terminal of the Pennsylvania Railroad, and also those used on the walls of the great vaulted waiting room of that station. The Richmond concourse is provided with seats along the center and at the walls.

Outgoing travellers reach the tracks by enclosed stairways on the east side of the concourse. From the trains the incoming travellers reach the concourse by ramps which come up to the concourse level from the west. Remember that the track layout is such that all trains stop in the station headed east and that it is a very simple matter to control the circulation of travellers to avoid congestion. The train platforms which serve two tracks are twenty-five feet wide and are covered with canopies which extend well over the cars, supported by sturdy Ionic columns of cast iron, not unlike those of the train platforms of the larger station at Washington. No interference is experienced between passengers and the handling of baggage. The trains all heading one way bring the baggage well to the east of the station and it is handled on a trucking platform separate from the passengers.

Station baggage is handled on the basement floor in the east wing of the building, which is on a level with the tracks. This portion of the basement has a separate service drive from Broad Street and is connected with the baggage and checking service on the waiting room floor by a spiral chute and elevator. In the basement of the building there is also provided space for the Federal mail service, a rest room and lounge for trainmen and conductors, the office of the station master who is responsible to



View Across the Waiting Room

the terminal company for the management of the station, and storage for the restaurant. The large area beneath the waiting room which has no outside light is used as a mechanical room. It contains the ventilating apparatus (the heating plant is in a separate building just north of the station tracks), electric service board and a refrigerating machine which supplies brine for the restaurant and cool drinking water for the entire building.

For practical purposes a description of the station scheme would not be complete without some mention of the minor features of the layout. These include a building for express, a heating plant, two electro-pneumatic interlocking plants from which the train movements of the whole terminal system are controlled, a supply house, an oil house and an ice house. The express building is built of light-colored brick and is located across the tracks from the station. It is served by one stub track and one through track. The platform between these two tracks is 12 feet wide and 350 feet long. The building is reached by city traffic over a roadway 34 feet wide which leads off of Broad Street some distance east of the station. This roadway is carried over the tracks of the station loop on a reinforced concrete viaduct. The engineers who designed and built this viaduct have had the good taste and judgment to consider its appearance as well as its stability in its construction, and it harmonizes quite satisfactorily with its surroundings.

The point of view of the engineers and railway men with reference to the building of this bridge is typical of their attitude toward the whole station project. They have shown commendable sympathy for beauty of execution as well as for utility and practicability of plan. This, of course, has made the architect's task as artistic mentor to his clients an easy and pleasant one. The architectural and practical results obtained in the work so extensively illustrated here attest this. This is equally well manifest in the treatment of the surrounding landscape. The fact that the entire site was practically free of building improvements when the project was first planned has made this a matter of easy study. Advice on the landscape work was given by Mr. W. H. Manning of Boston. Opportunity was presented for the simple treatment of broad areas. The space immediately in front of the station, the plaza, consists of broad roadways to the right and left with a walk in the center. Two large grass plots extend to the Broad Street sidewalk line. The large areas outside of the plaza to the right and left are also plain turf with beds of flowering shrubs and bordered with hardy perennials.



Detail of Door to Dining Room

At those places where the contours and levels are such as to necessitate slopes, as for instance, east of the station between the level of the plaza and the roadway down to the basement baggage room, these slopes are covered with ground-covering plants and vines, such as honeysuckle, Japanese bitter-sweet and wisteria. This same treatment is used on the cuts around the entire track loop and connections. The plants form a mass of foliage which is green for the greater part of the year and their roots seem to hold the slopes in proper shape to avoid weathering. The express driveway banks from Broad Street up to the concrete viaduct are covered with Armour privet, which Richmond people say is practically ever green in their climate. Beyond the viaduct the express drive circles around an area laid out as a simple shrub garden, including yellow jasmine, dogwood and red-buds. The large central portion of the loop is in turf.



BROAD STREET FRONT

UNION STATION, RICHMOND, VA.

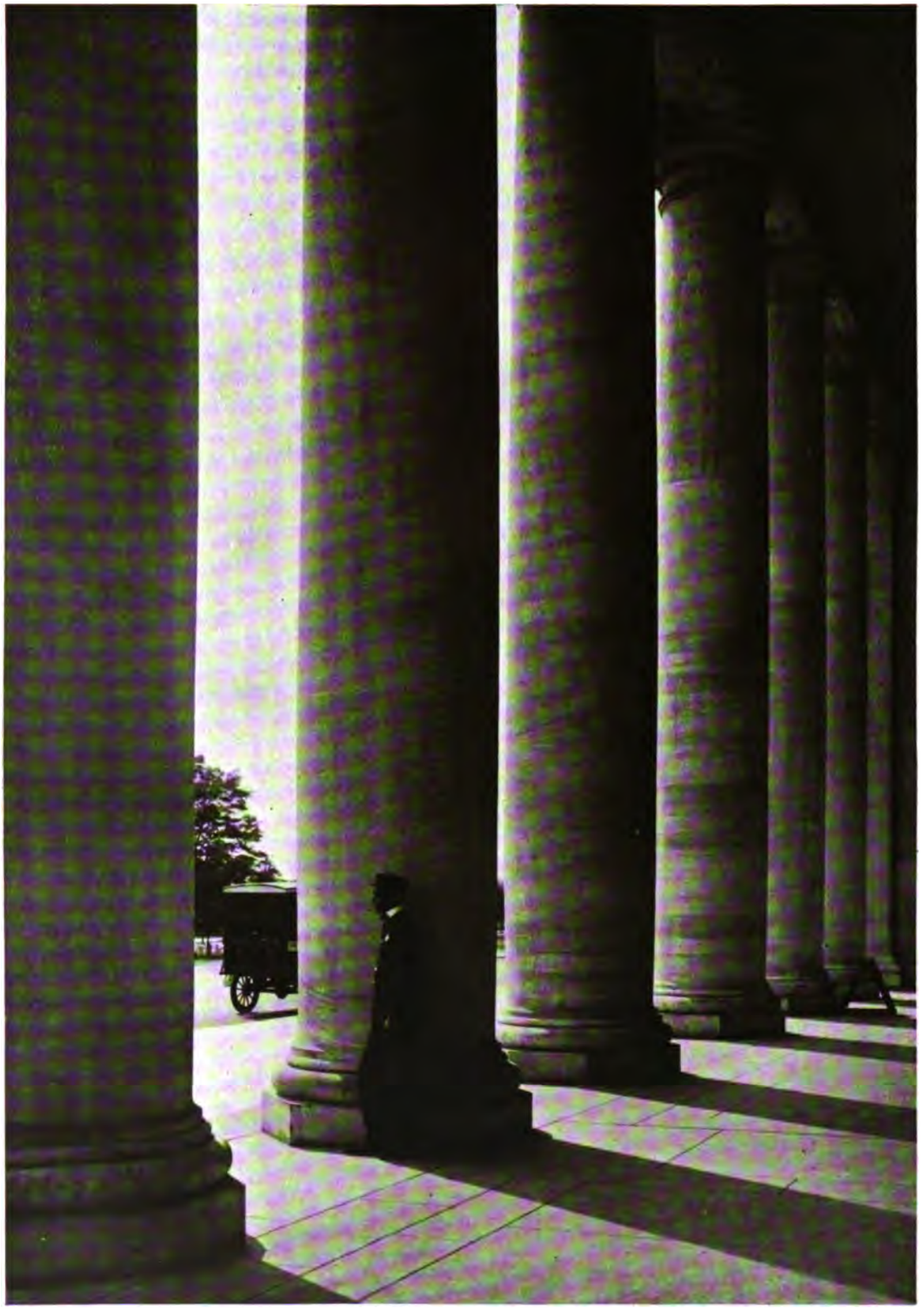
JOHN RUSSELL POPE, ARCHITECT



INTERIOR OF PORTICO

UNION STATION, RICHMOND, VA.

JOHN RUSSELL POPE, ARCHITECT



COLONNADE

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VIEW ACROSS WAITING ROOM TOWARD ENTRANCE

UNION STATION, RICHMOND, VA.

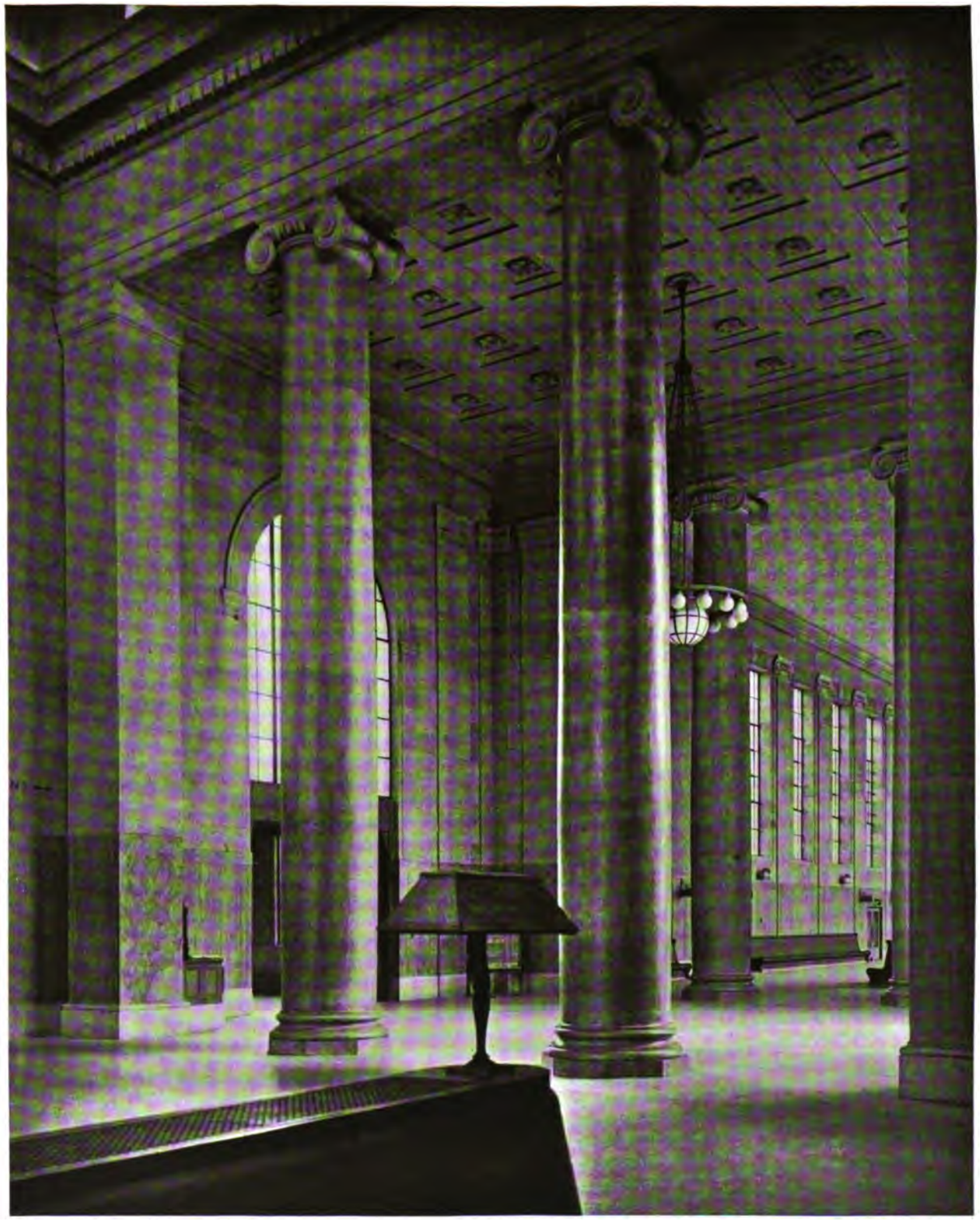
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WAITING ROOM, LOOKING TOWARD CONCOURSE

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VESTIBULE OF CONCOURSE

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CONCOURSE

UNION STATION, RICHMOND, VA.

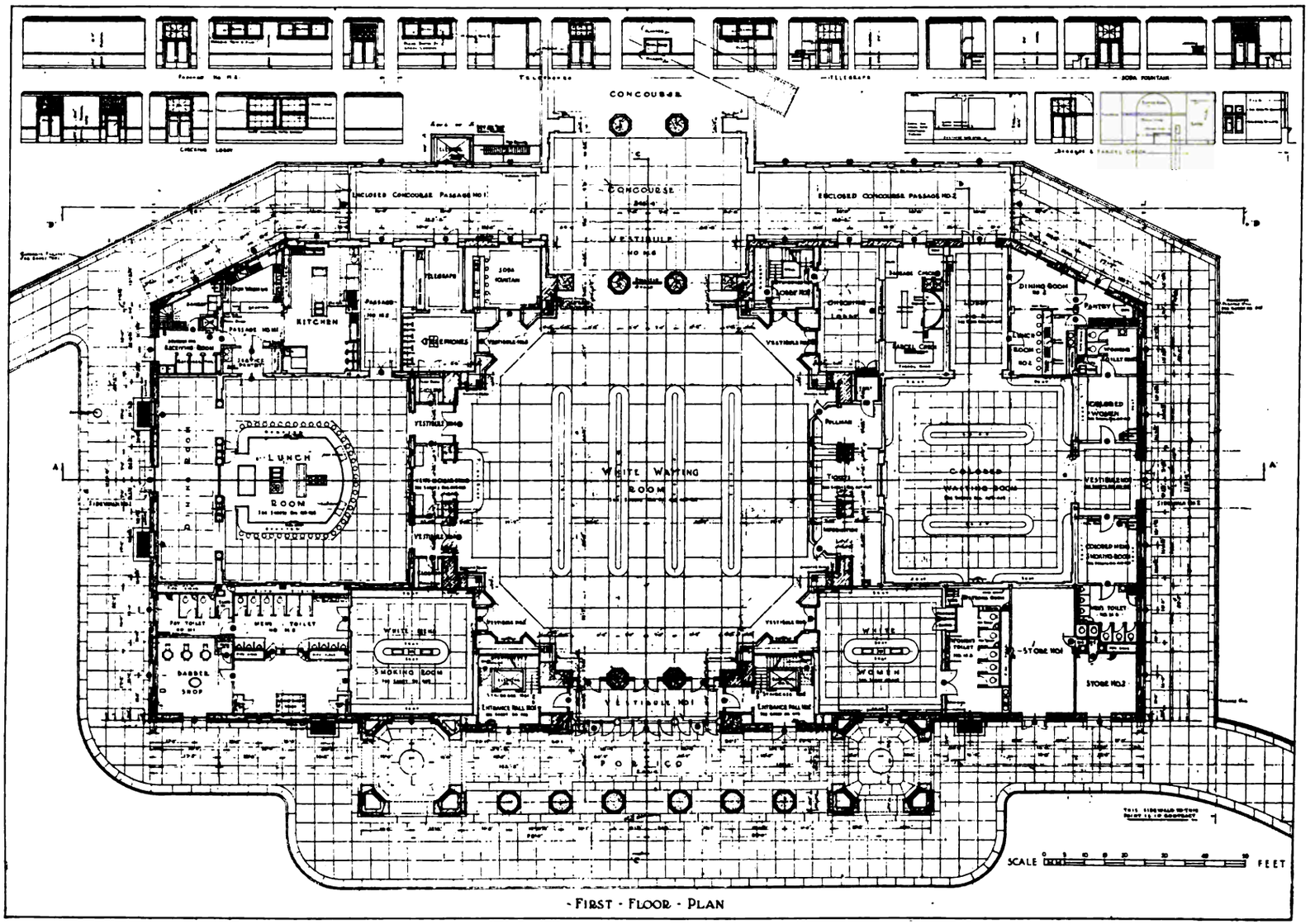
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VIEW FROM THE PLAZA

UNION STATION, RICHMOND, VA.

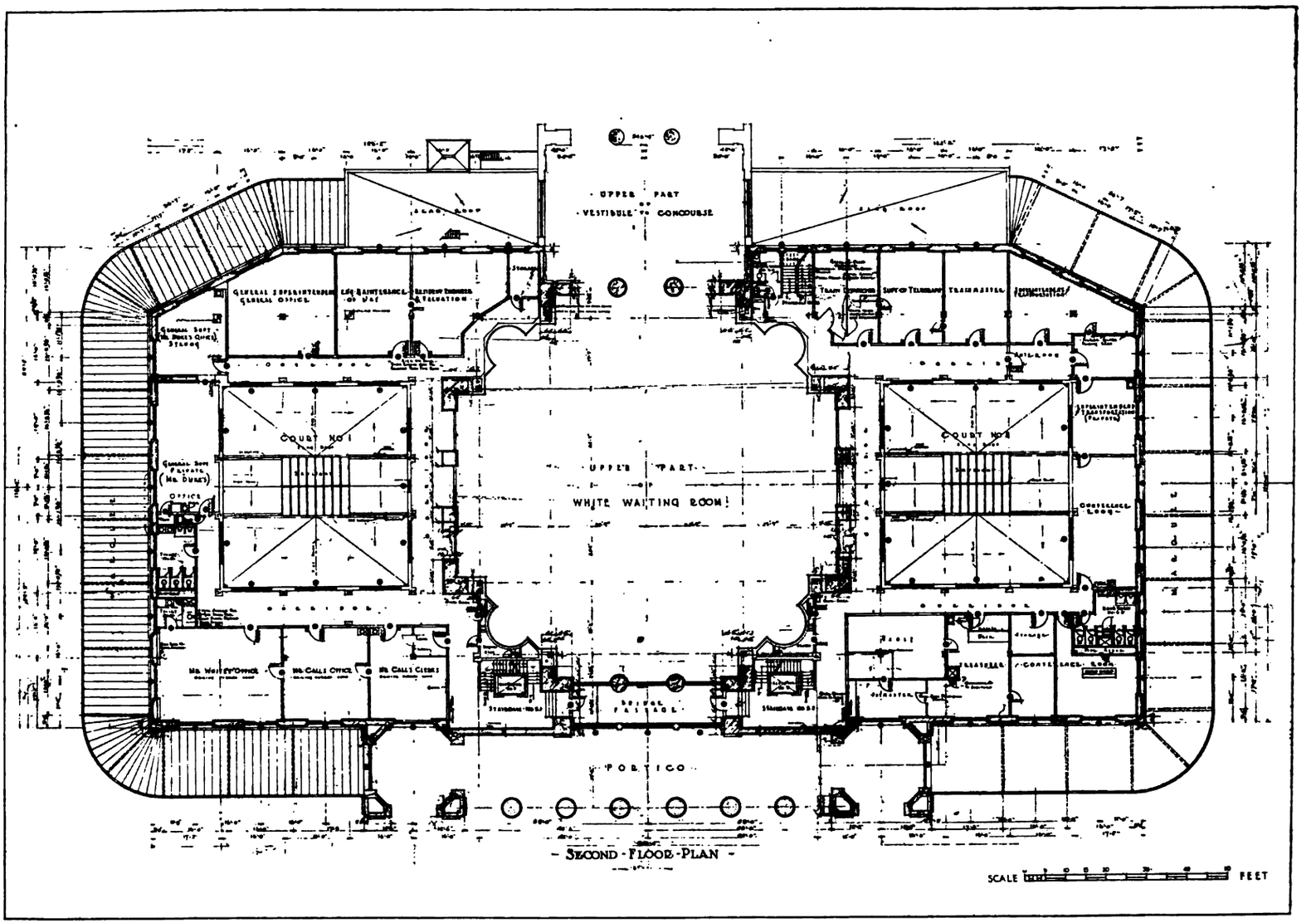
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FIRST · FLOOR · PLAN

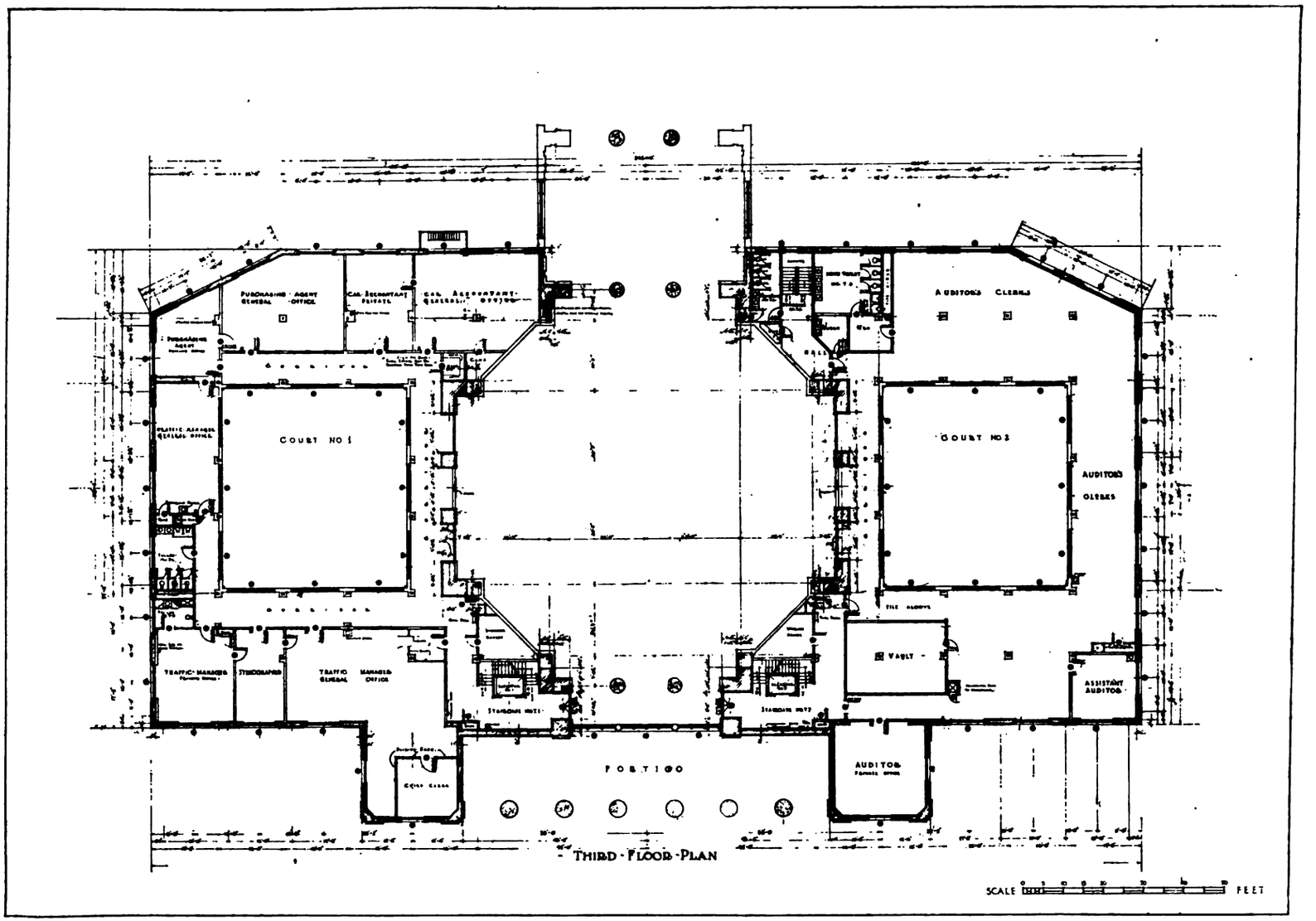
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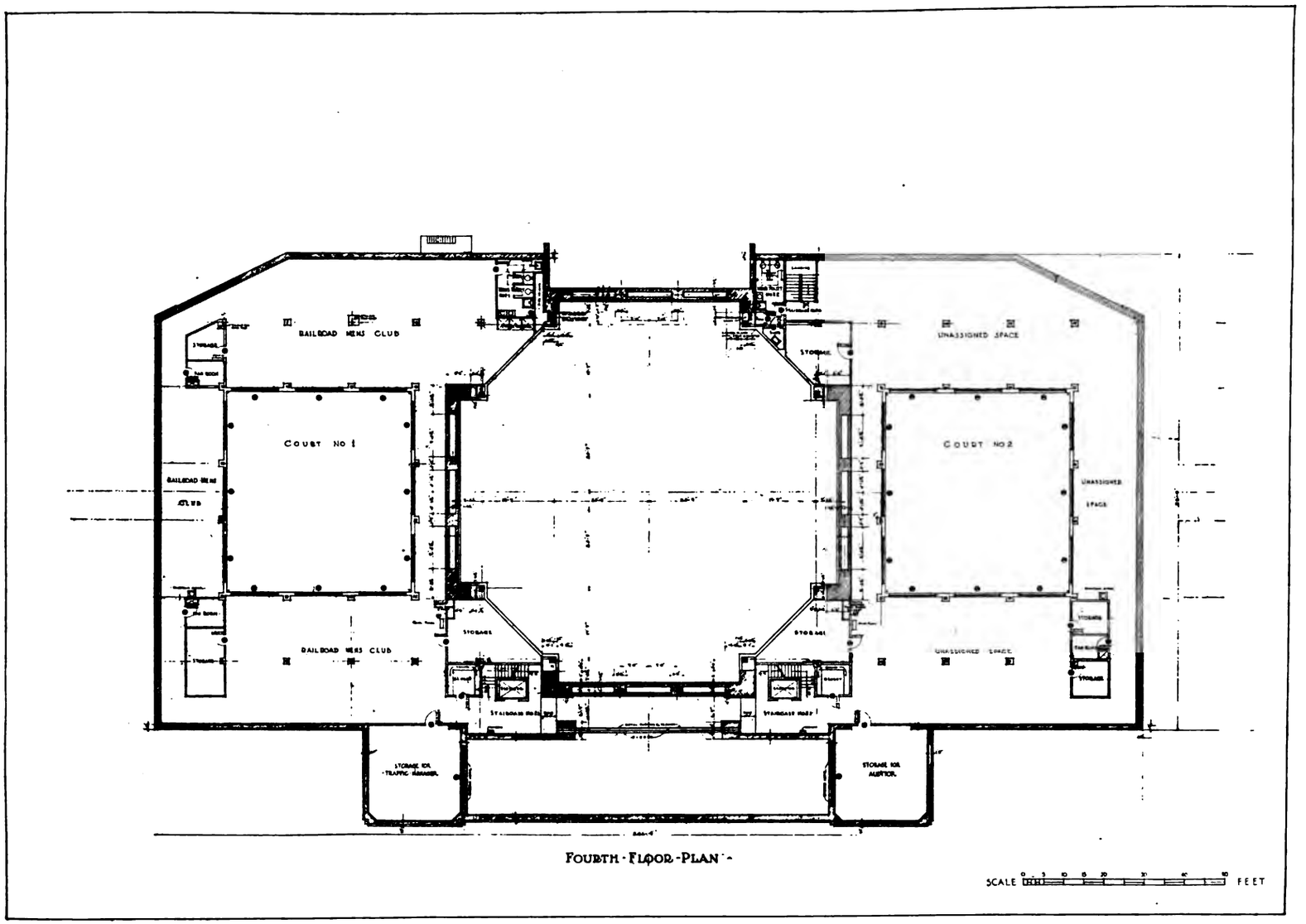
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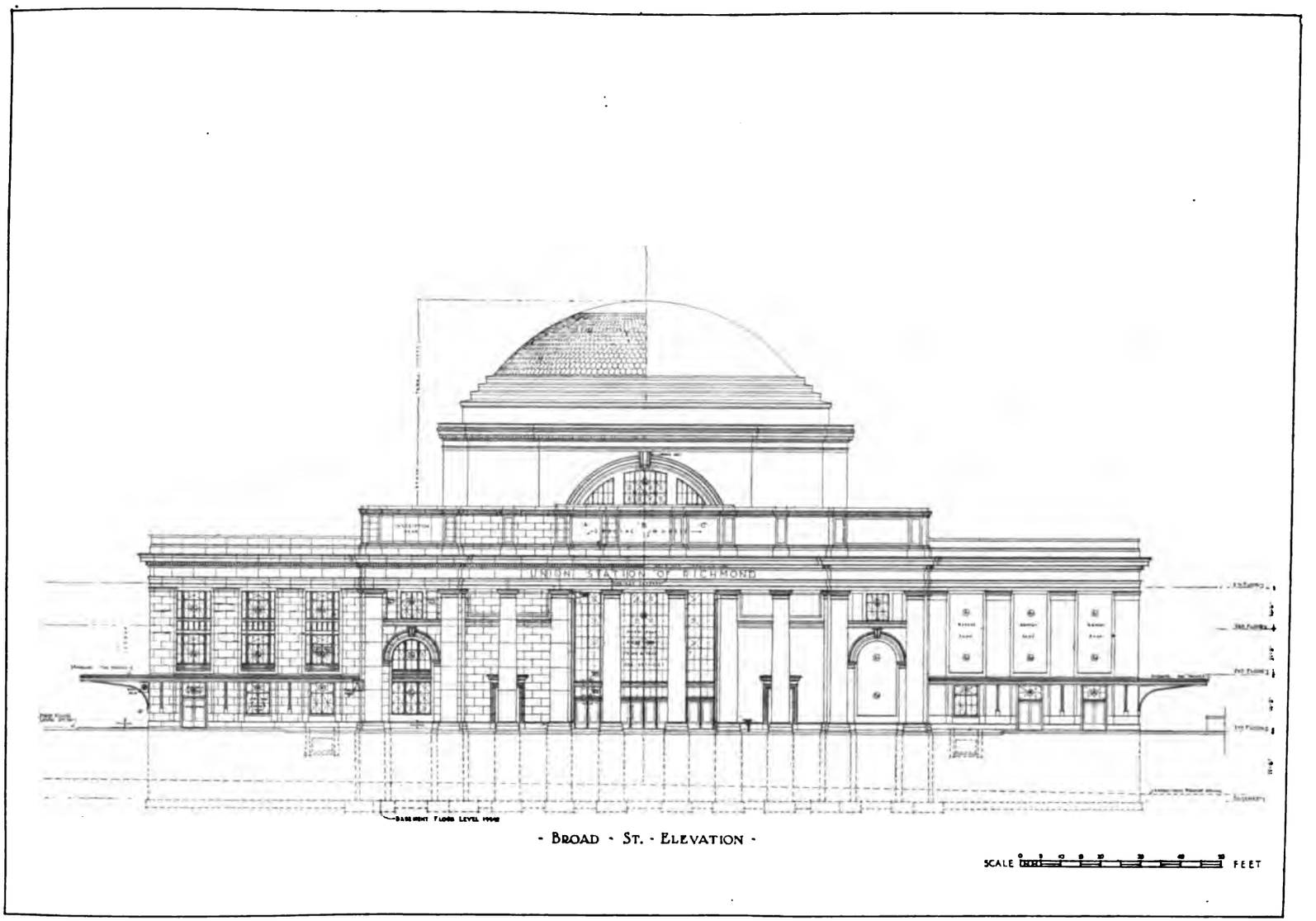
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FOURTH·FLOOR·PLAN

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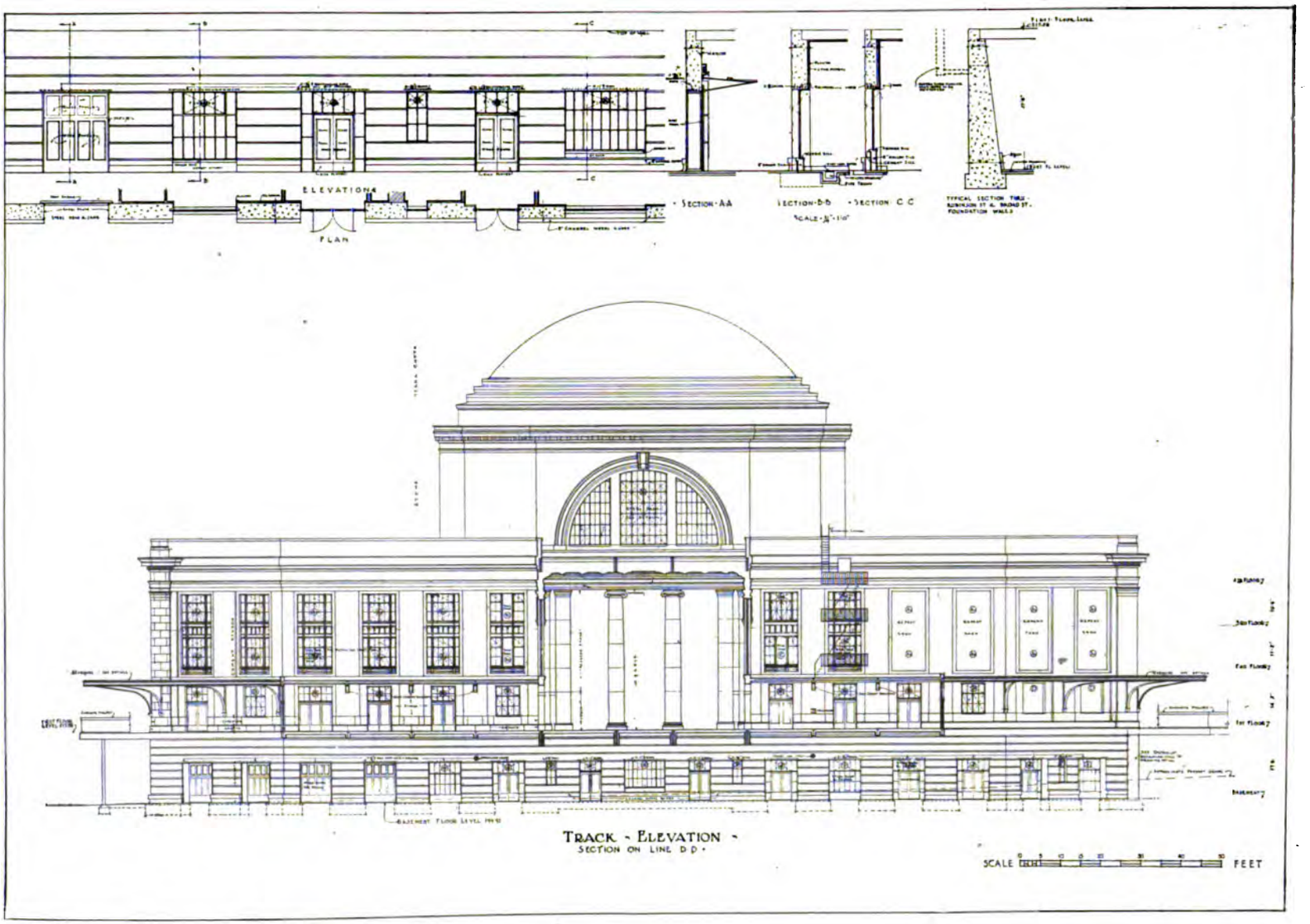
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- BROAD - ST. - ELEVATION -

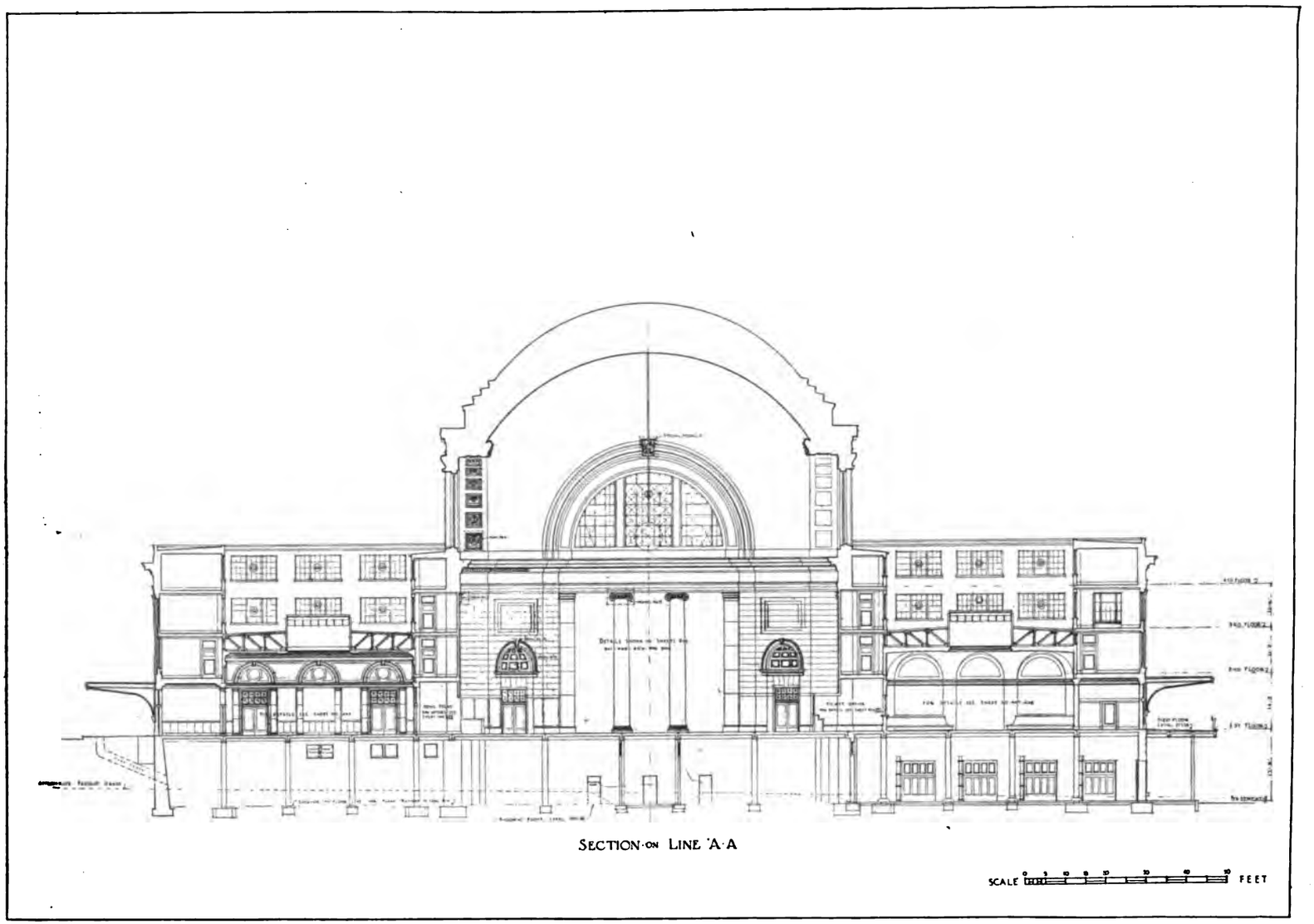
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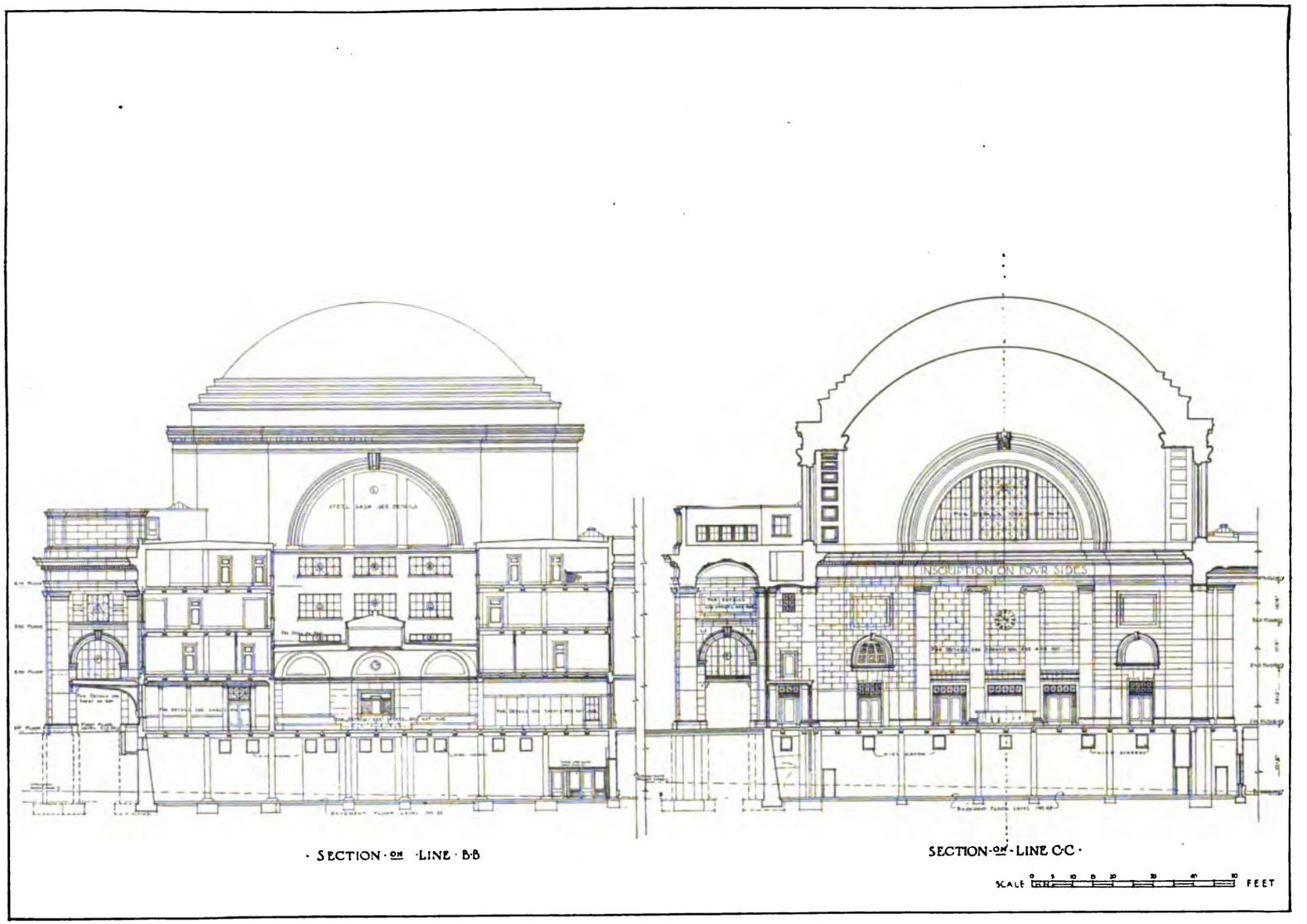


SECTION·ON LINE 'A·A

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UNION STATION, RICHMOND, VA.

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THE REVIEW OF INTERIORS

Department Edited by J. H. Phillips.



EARLY AMERICAN INTERIORS, PART III

A STORY that is good can be told in many entertaining ways, and at each telling it may be given interest and a new and vital thrill—it is the same with the designing of interiors. The motifs may be old, the manner familiar, but the treatment may be ever fresh and personal. A vital thrill is the thing we all look for to inspire us in any work of art. It results from the indefinable something that the artist puts into his work that makes it more than merely a good composition, more than merely a correct example of style, but something that has the power to inter-



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The Banquet Hall at Mount Vernon

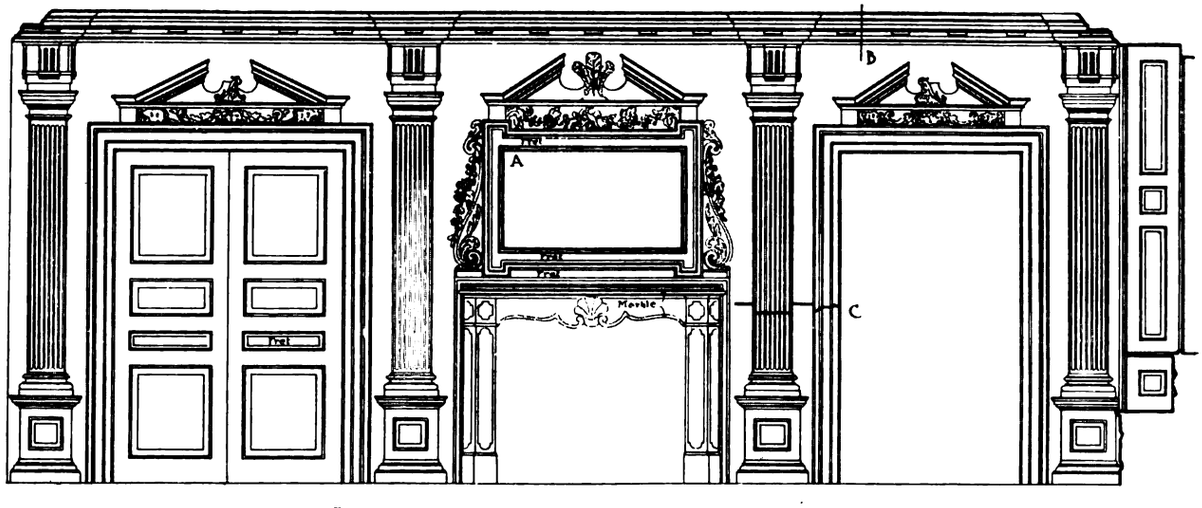


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The West Parlor at Mount Vernon

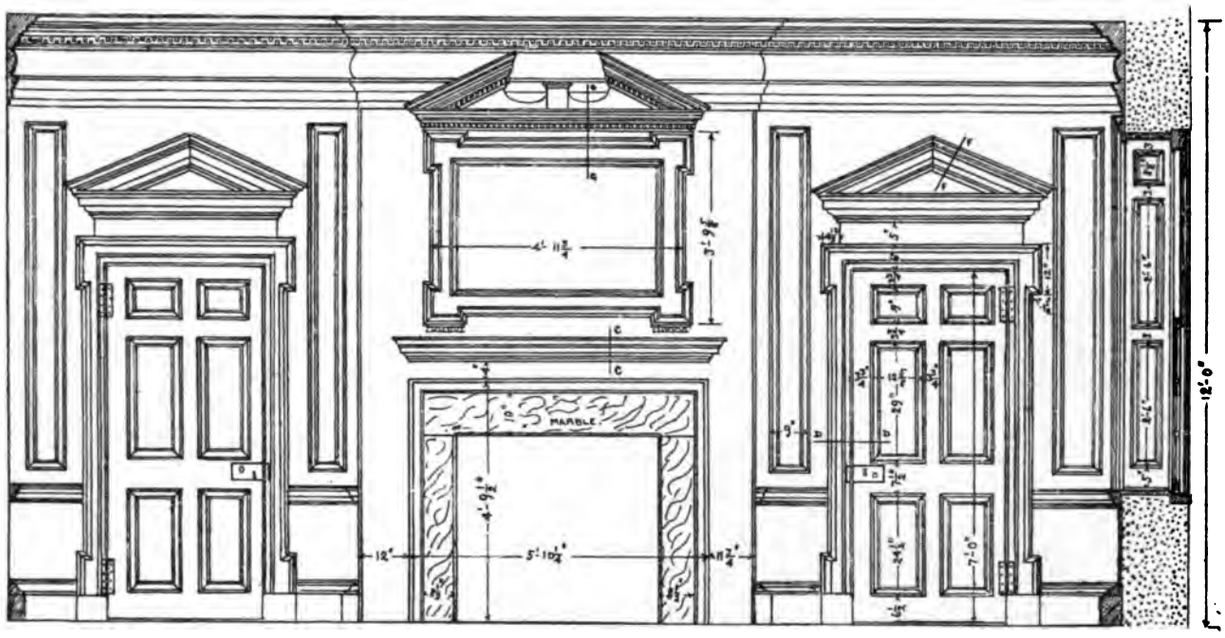
est, attract and move us with its character. It is this that gives responsiveness to an interior, that makes it unfold new beauties, subtleties and charming suggestions as one studies it and becomes acquainted with it.

How inspiring it is to see Mount Vernon and its beautiful interiors. These rooms tell a delightful story of the culture of early American times. They have a gentle quality that is most appealing, a truly American character.



Detail in the Guest Room, Philipse Manor House, Yonkers, N. Y.

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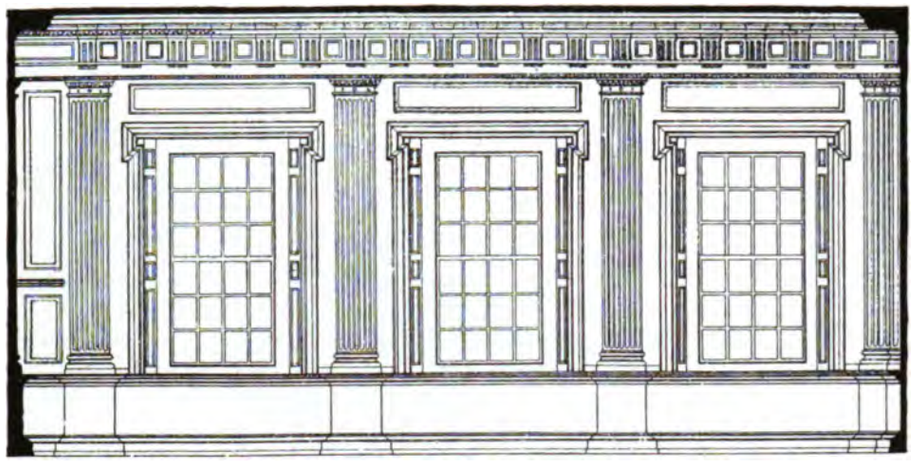
West Side of Parlor, Graeme Park House, Horsham, Pa.

From "Measured Drawings of Some Colonial and Georgian Houses" by Donald Millar. Courtesy of Architectural Book Publishing Co.

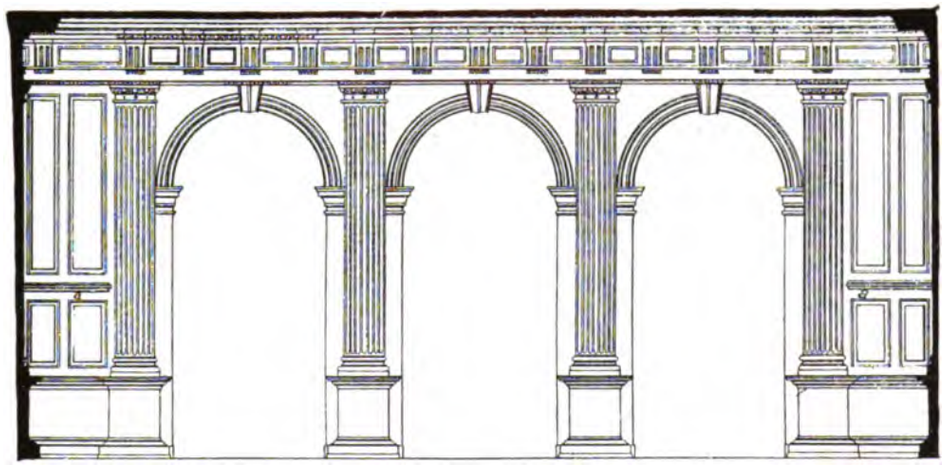


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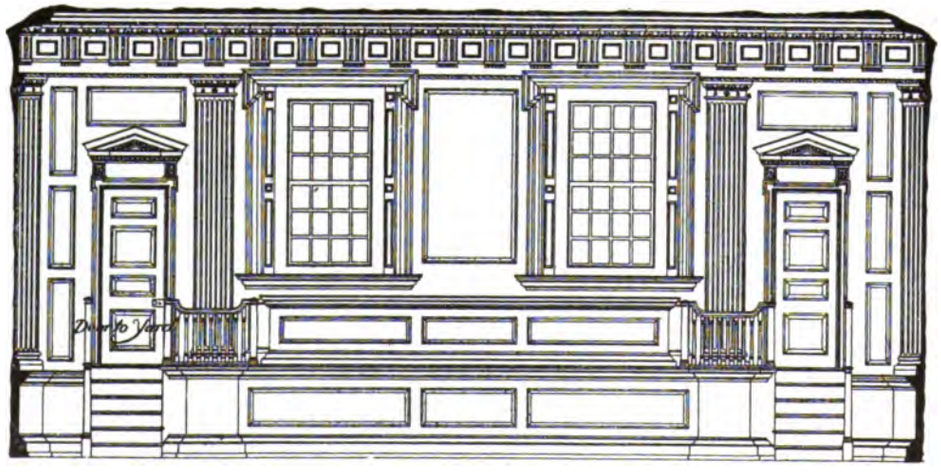
Banquet Room, Independence Hall, Philadelphia, Pa.



North Wall and South Wall



East Wall



West Wall, Showing Bench

State Supreme Court Chamber, Independence Hall, Philadelphia

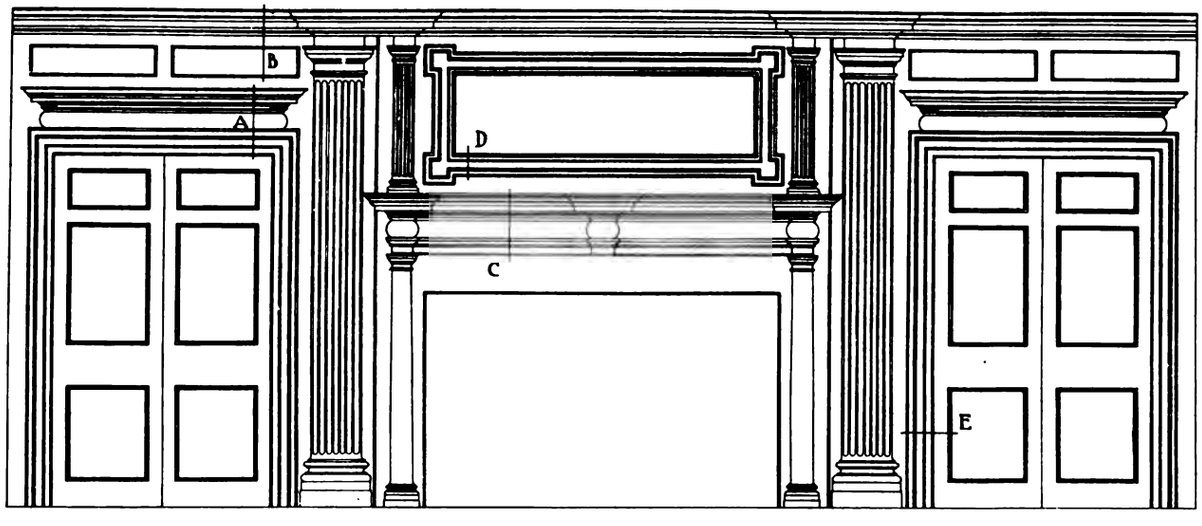
Reprinted from "The Georgian Period." Courtesy of The U. P. C. Book Company, Inc.



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The Council Chamber, Old State House, Boston, Mass.

Though the architectural details of these interiors are in the manner of the contemporary Georgian work in England and some of the furnishings and accessories of decoration are actually of French production, the way in which they are combined here, the spirit in which they are used, is essentially American. The mantels, the cornices, the ceiling decorations and the door and window architraves are quite like those of Eighteenth Century English interiors. The furnishings and hangings have French characteristics, due probably to the fact that many things were presented to General Washington by Lafayette. The rug in the West Parlor is particularly inter-



Detail in the Dining Room, Philipse Manor House, Yonkers, N. Y.

Reprinted at reduced size from "The Georgian Period." Courtesy of The U. P. C. Book Co., Inc.

esting, for it was woven by order of Louis XVI and sent by him as a present to General Washington. The fine old piano and the handsome French clock are contemporaneous with this rug.

By this combination of the artistic influences that came to bear upon the decoration and furnishing of Mount Vernon, both the English traditions of the majority of people who made up the population of this country in the early days of American independence, and their close association and sympathetic relations with France were expressed in a natural way that brought into being a manner of decorating different from that of any European country and different from the preceding phases of early American decoration—a manner characteristic of the period, the people and of the country.

The general impression produced by these interiors is not only one of great beauty, but what is of far greater importance, one of harmony and consistency. For this, much credit is due the Mount Vernon Ladies' Association of the Union, organized in 1856. Their appeal to the patriotism of all American women resulted in the accomplishment of their noble project. They have endeavored to retain the appearance of that simplicity which characterized the home life of Washington and to preserve his home with due reverence. At the same time it was necessary that problems incident to increasing wear should be met, and this has also been accomplished.

There are other places in America that have been wisely preserved and restored by organizations of a more or less local character, formed for the purpose, and there are other places that should be preserved in a similar manner before the opportunity for taking this action has passed. The preservation of examples of early architecture and decoration constitutes a most authoritative and interesting history of our country. Interiors like those at Mount Vernon, in the Philipse Manor House at Yonkers, Independence Hall, Philadelphia, and the Old State House, Boston, are inspiring beyond measure, and they reflect the culture of early American life which reached its zenith in the Eighteenth Century.



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The Hall, "Craigie," Home of Longfellow, Cambridge, Mass.

THE REVIEW OF RECENT ARCHITECTURAL MAGAZINES

By C. HOWARD WALKER

IN THE issue of *The Architect and Engineer of California* for December, the opening article by Charles H. Cheney on "War Memorials," is principally in favor of some sort of community building. Mr. F. W. Fitzpatrick recommends a peace capital in New Jersey. His article is illustrated by Mr. Ernest M. Hebrard's design. He considers it to be a practical conception. Possibly, but no convincing arguments have yet been forthcoming. Expense of maintenance and difficulties of control are subjects for consideration even if the artistic and ethical designs apparently justified the initial expense.

The Architect and Engineer of California, March. Report of jury appointed by the Oregon Chapter A.I.A. to name the most notable buildings, etc., in Portland, Oregon. Jury consisted of three architects, the professor of art in the University of Oregon and the curator of the Portland Art Museum. The work selected is good and it is interesting to note that McKim, Mead & White's Portland hotel, which was considered admirable thirty years ago, while still being placed as a notable building, is now rated as inferior to others. Much of the work is by Mr. Doyle. His Central Public Library is dignified, well-proportioned and well-detailed. The house for F. J. Cobbs, Esq., an English Tudor house, shows Mr. Doyle's ability in another style. There is a popular idea, which, like many other popular ideas, is based upon the modern fetich of specialization, that architects are best in some one style or type of work. The actual fact is that an able architect deals ably with any type of work he will undertake. Mr. Doyle is an example. The long lawn front of Mr. Cobb's house is admirable. The garden front has an unfortunate junction of the main body of the house and L. The Reed College buildings are well done—as is also the United States National Bank. Mr.

(From "The Architect and Engineer")



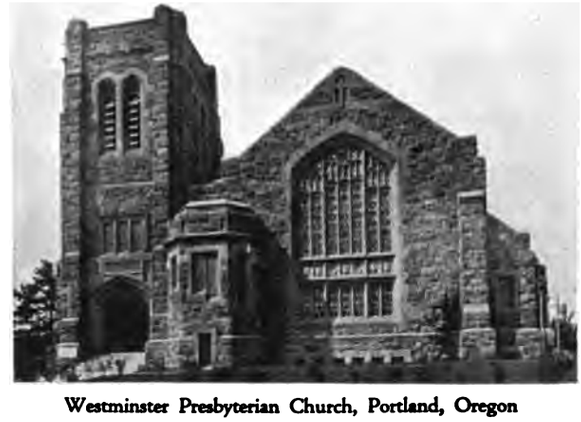
Residence for F. J. Cobbs, Esq., Portland, Oregon
A. E. Doyle, Architect

(From "The Architect and Engineer")



Central Public Library, Portland, Oregon
A. E. Doyle, Architect

(From "The Architect and Engineer")



Westminster Presbyterian Church, Portland, Oregon
Lawrence & Holford, Architects

Wade Pipes' house for Dr. Fenton has a charm reminiscent of Voysey's work. Mr. Narramore's Franklin High School and Benson Polytechnic High School are well proportioned, clean-cut, but monotonous. Mr. Cheney writes upon "Zoning the City."

(From "The Architect and Engineer")



House for Dr. Fenton, Portland, Oregon
Wade Pipes, Architect

The Architectural Forum, March, is largely devoted to modern farm buildings by Delano & Aldrich, Lewis Colt Albro, Alfred Hopkins, Wilson, Eyre and McIlvaine, Duhring, Okie and Ziegler, Benjamin Wistar Morris, Elisha Harris Janes. This is a strong group of men in picturesque design and the sane adaptation of simple, but varied requirements into attractive groupings. The silo has added a feature which is new and yet old. What the colombier was to the French farm at the Manoir d'Ango, for instance, the tower of the silo is to modern farm buildings—it provides a contrasting geometric solid to the long masses of the farm buildings. The opportunity has been seized with avidity and often admirably treated. The Fahnestock Farm at Cold Spring, N. Y., by Mr. Albro, is especially good. The construction problem is by Mr. N. A. Richards upon the rebuilding of the Custom House, Boston. This was a problem which is very unlikely to occur again, and is an ingenious and withal a direct and simple piece of engineering. It is to be wished that the termination of the design of the tower had been equally direct and simple. Peabody & Stearns were the architects and Purdy & Henderson the consulting engineers. There is a fine appreciation of Arthur Durand Rogers by Ernest John Russell, who says justly of him that "he possessed the same high ideals that are inherent in the leaders of the profession" (i. e., architecture). Mr. Rogers was an idealist and creative in his work.

Architecture and Building, February—The building for the New Jersey Zinc Co., 160 Front Street, New York, by H. J. Hardenbergh, of good lines is unfortunately broken in tones by the combination of brick and stone. The residence of Otto H. Kahn, Esq., East 91st Street and Fifth Avenue, by C. P. H. Gilbert, is a dignified building of the Palazzo type, with the piano nobile announced, and ascending wall textures well considered. It has excellent proportions and detail.

Architecture, March—Elmer Grey in his article illustrates and describes "Southern California's New Architecture," i. e., the choice of the simple stucco walls, flat or low-pitched roofs, tiled, which are fitting for the climate and in place with Spanish traditions. This architecture is one which is bare without terraces, gardens, and luxuriant foliage associated with it, but in Southern California, it has all these. The exuberance of ornament which appeared at first in the West when stucco began to be used has given place to the broad

(From "The Architectural Forum")



Farm Buildings for Major Clarence Fahnestock, Cold Spring, N. Y.
Lewis Colt Albro, Architect

(From "Architecture and Building")



Building for the New Jersey Zinc Co., New York City
H. J. Hardenbergh, Architect

quiet expanses of wall and rich focussed spots of ornament which are so characteristically Spanish, excepting in the Plateresque style and the work of Churriguera. Undoubtedly the example of the delightful exposition buildings of Mr. Goodhue at San Diego have strongly influenced this new work. The residence of Mr. Julian Eltinge at Los Angeles, by Mr. Pierpont Davis, and that of Todd Ford, at Pasadena, by Mr. Reginald Johnson, are examples of the manner. Then follows an article "Gardens and Their Ornament," unsigned, with attractive illustrations in the text and plates. Mr. Egerton Swartwout's Roger Williams Memorial Church at Washington, is carefully studied in its proportions and has less than is usual in buildings of this type, the feeling of incongruity in scale of the various orders employed. There is great difficulty in harmonizing orders of various scales. Perhaps it would be as well to reduce the necessity somewhat. Messrs. Bates & How show an excellent brick and half-timber house for Mr. W. V. Lawrence, Lawrence Park, Bronxville, N. Y., and there are two attractive residences at Cincinnati by Mr. G. C. Burroughs. The Ranch House, North Yakima, Wash., by Messrs. Kenyon and Maine is somewhat affectedly picturesque especially as to its tower, the interiors are good. Mr. Alfred C. Bossom's housing development for Connecticut Mills, Danielson, Conn., is excellently done, and is one of the very few of the American housing developments that excites enthusiasm. Of the eight small residences in New Jersey, shown by Mr. Kenneth Dalzell, those for Messrs. C. Warren Force, E. Leslie Winpenny and Douglas Griesemer are the best.

The Architectural Forum, April, illustrates very fully the New York street decorations for the parade of the overseas troops, which we have previously mentioned. The principal plates are of McKim, Mead & White's Pennsylvania Hotel, which is in every respect distinguished work. The Carmelite Convent, Santa Clara, Cal. by Messrs. Maginnis & Walsh, is admirable — restrained, in excellent scale throughout, with richness of detail well placed. The bell tower is especially fine. The sanctuary is finely detailed with rich ornament. It could be wished that the two twisted columns had been omitted and a less disturbed motive substituted. Mr. Edwin S. Parker advocates the model for architectural representation. We thoroughly agree with him in this desire. In the Fifteenth Century, and later, architectural projects were presented in the form of models. It was not until great schools of architecture were established that the rendu took the place of the model. The lack of general conception and penetration of the design, the failure to appreciate the relations to each other of geometric solids, the neglect of the third dimension, excepting as it is

(From "Architecture and Building")



Residence of Otto H. Kahn, Esq., New York City
C. P. H. Gilbert, Architect

indicated by shadows which can under the conditions of the rendu show minor projections only, has manifested itself for years. The return to the frequent use of the model is to be ardently desired.

The Architectural Record, March. Mr. Leon V. Solon, who has been writing the most appreciative and instructive articles upon Greek polychromy, has an excellent design in color in the manner of Greek metopes upon the cover. He also writes the opening article upon the residence of Mrs. Andrew Welch, San Francisco, by Willis Polk & Co. The design is deliberately Spanish Renaissance of a Plateresque type—inspired by the Caza de Zaporta, Zarragossa, and is very satisfactory. It is interesting to see that the California Spanish influence is now developing into richer work than is to be found in the so-called Mission Style. The pre-eminent value of Spanish work is its consistent harmony of scale throughout. Mr. Solon's article analyzes this characteristic admirably and could be taken as an appreciative lecture upon the Plateresque style, thorough and sensitive. Much of the charm of the house depends upon the skill evident in the decorative sculpture and carving, which has been admirably done by Mr. Leo Lentelli. Mr. Chas. H. Moore's article, "Some Principles of Design and Construction in Domestic Building," should be read and carefully considered by every architectural student. Its motto is sincerity, lack of affectation and the expression of natural and simple methods of obtaining results. The detailed statements of methods to be pursued are sane, reasonable and should be axiomatic. Mr. Charles C. May writes "A Post-War Construction Program, Part I, The Building Bureau of the Y. M. C. A." It is well illustrated, exhaustive, describes methods and progress of work and the work is well done. The articles, one by Sylvester Baxter upon the Government's housing project at Quincy, Mass., and the other by George Nimmons upon "Modern Industrial Plants, Part V," have a certain amount of interest as data for reference and comparison of similar work.

(From "The Architectural Forum")



Carmelite Convent, Santa Clara, Cal.
Maginnis & Walsh, Architects

The Architectural Record—April. The opening article relates to the Summer home of Geo. C. Nimmons, Esq., at Flossmoor, Ill. The house is attractive and simple and the grounds broadly and attractively treated. The second article is upon that versatile genius, Mr. Leon V. Solon, and is well illustrated. It is by Mr. H. Van Buren Magonigle and is thoroughly appreciative. He writes of Mr. Solon as pre-eminently a potter. He is certainly that, but he is also a discriminat-

(From "Architecture")



Water Garden, Bridge House, Weybridge, England
By Harold Peto

(From "Architecture")



Residence of Julian Eltinge, Esq., Los Angeles, Cal.
Pierpont Davis, Architect

(From "The Architectural Forum")



Sanctuary of Chapel, Carmelite Convent, Santa Clara, Cal.
Maginnis & Walsh, Architects

(From "The Architectural Forum")



Nave of Chapel, Carmelite Convent, Santa Clara, Cal.
Maginnis & Walsh, Architects

ing student who seems more than any other man thoroughly to comprehend Greek polychromy. The restorations of color in Greek work by Hittorff and others have been so absolutely inconsistent with the fine sense evident in all other expressions of Greek art, that it is amazing that Hittorff's restorations should have been credited for so long. Mr. Solon comprehends the frequent use of gold with color and the vibrant subdivisions of color, and realizes that flat solid areas out of scale with the refinements of form were not used. Mr. Charles C. May writes Part II of "A Post-War Construction Program." It is instructive. Mr. Nimmons continues his consideration of "Modern Industrial Plants." This also is informing. The office building of Gaston, Williams & Wigmore, Inc., on lower Broadway, New York, by Mr. Alfred C. Bossom, is excellent in motive and well detailed. The intercolumnation is, however, so broad that it seems weak and thin. With a colossal order of so wide an intercolumnation, intermediate long mullions giving the appearance of assisting factors of support to the lintels would have improved the design. Mr. Weitenkampf gives "Bibliographical Notes upon the Esthetics of Engineering." At present in America there is no such thing — for the definite and distinct reason that the engineer, as now educated, does not feel the necessity for any such thing, and while he may not disassociate building from art, does disassociate art from building, i. e., art is not to him the essential thing. It is the old world-wide and eternal difference between materialism

(From "Architecture")



Residence of Todd Ford, Esq., Pasadena, Cal.
Reginald Johnson, Architect

(From "Architecture")



House for Samuel F. Pogue, Esq., Cincinnati, O.
G. C. Burroughs, Architect

(From "Architecture")



Residence for W. V. Lawrence, Esq., Bronxville, N. Y.
Bates & How, Architects

and idealism. Material exists and is necessary. To the majority of mankind idealism, as a daily working force, is a luxury and to an extent sybaritic, but as the luxuries of yesterday become the necessities of today, there is still hope for art. When the architect recognizes that though art transcends material it is expressed by it, he will appreciate the value of knowing the principles of engineering as well as the necessity for collaborating with the engineer, and when the engineer realizes that exact scientific knowledge is merely the skeleton to be clothed by art, he will appreciate the value of learning something about architecture, and collaborating with genius. There are, of course, men who are neither one nor the other in both professions. A capacity for assimilating an exact science is more often found than is genius, and an architect without some genius belies the name. It is, therefore, largely a matter of personal equation. But that some amelioration of the constant quibbling of both can undoubtedly be obtained by mutual appreciation is evident.

(From Architecture")



Ranch House, North Yakima, Wash.
William M. Kenyon, Maurice F. Maine, Architects

The Journal of the American Institute of Architects for April devoted its illustration pages to the architecture of Nashville, Tennessee—as the last convention was held in that city. The most interesting work is that done either by William Strickland or under his influence. A certain monumental dignity marks these buildings and the residences have a formal air.

(From "Architecture")



Screen at Easton Neston, Northamptonshire, England
Eighteenth Century

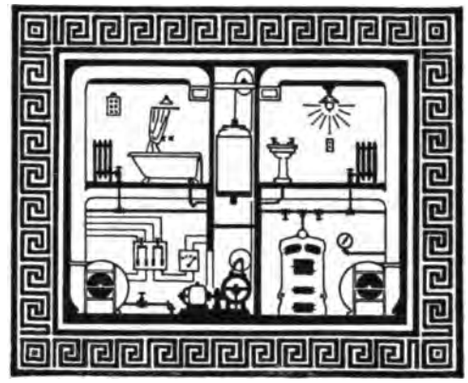
(From "Architecture")



House for Dr. Frederick W. Lamb, Cincinnati, O.
G. C. Burroughs, Architect

EQUIPMENT

DEPARTMENT EDITED BY J. F. MUSSELMAN



NOTES ON ILLUMINATION

THE use of the carbon filament electric lamp for artificial illumination has disappeared only very recently, in fact, its valedictory might be considered a war measure for it was the enthusiasm for economy which the war brought that definitely prohibited its use. The slowness to take advantage of the increased efficiency of the modern lamp is difficult to understand, but people went on paying from two and one-half to three times as much for illumination as it was really worth; and in the face of recommendations to the contrary from the men who were selling the electric energy.

From the point of view of the layman the development of the modern lamp has not been gradual but has been made in two tremendous steps, first the invention of the low intensity filament lamp consuming from three to four watts per candle power, and second the introduction of the tungsten filament lamp consuming from one to one and one-quarter watts per candle power. The minor improvements in efficiency, stability and length of life which have been made gradually in both types of lamps were of course obvious but not vital or very interesting to the individual users of lamps.

In the day of the carbon lamp little attention was given to the economical spacing of lighting units and distribution of light, possibly on the theory that the greater part of the energy was wasted in any event. The number of lights and size was generally determined by the roughest sort of rule-of-thumb method and electric lighting plans were often prepared with only a guess to guide and without even an approximate estimate of the intensity of illumination required. Our standards have changed, however, to almost as great a degree as has the efficiency of lamps and the intensity of illumination demanded today is very much in excess of our requirements a few years ago. If this were not the case it might be said that two-thirds of the feeder copper in the lighting system of any building constructed more than twelve years ago is today lying idle.

As lights have been improved, and reflectors perfected the amount of available information and data on illuminating subjects has been greatly increased. The manufacturers of lamps have realized the importance of having light outlets so located as to give the best illumination per unit of energy consumed. The manufacturers of shades and fixtures have also figured more carefully on the efficiency of their products and now issue as the major part of their advertising literature not pictures of their reflectors, but distribution curves showing the light distribution of each reflector at every angle.

Aside from the question of absorption of light by dull-colored and rough surfaces, which must be studied in individual cases, the intensity of

illumination is so easily determined that little time is required to solve even a complex problem. It is based on "the law of inverse squares"; that is, the intensity varies inversely as the square of the distance from the source, or when reduced to standard units the intensity in foot-candles equals the candle power divided by the square of the distance to the point to be illuminated. If it is necessary to get the resultant of the illumination on a horizontal plane the intensity thus determined must be multiplied by the cosine of the angle to the vertical of a line from the source to the point in question.

By selecting a reflector to give the proper distribution as shown by its curve, one of which is indicated by the cut, it is only necessary to add together the intensity from all different sources to complete the results. The curve illustrated is given as a typical example only and fits only one size lamp in one specific reflector.

As an example of the use of the distribution curve given, we find that at an angle of 30° the candle power from a single unit is 360 which will give a direct intensity of one foot-candle at a distance of 19 feet. To reduce this to a horizontal plane the one foot-candle is multiplied by the cosine of 30° giving .866 foot-candles.

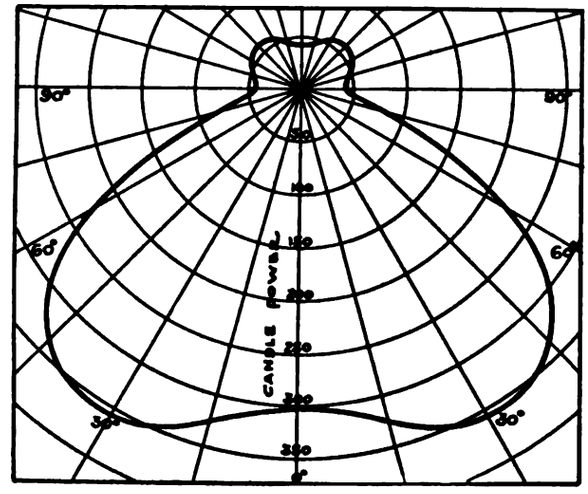
On any individual problem, however, this is going at the matter backward, for the first thing to be determined is the intensity desired. In this we can be governed only by what experience has shown to be usual, with judgment as to the unusual conditions of the case in hand.

Calculations of illumination where indirect and semi-indirect fixtures are to be used become much more complicated but with these the manufacturers are now issuing distribution curves or tables from which the illumination can be determined.

The following table, compiled for the most part from literature of lamp and reflector manufacturers, gives average values of the intensities in foot-candles usually recommended for various classes of service:

TABLE OF INTENSITIES IN FOOT-CANDLES FOR DIFFERENT CLASSES OF SERVICE.

Art Gallery (on walls)	6.0
Auditorium (general)	2.0
Ballroom (general)	3.0
Bank (general)	2.0
Bank (on desks)	5.0
Billiard Room (general)	1.0
Billiard Room (on tables)	6.0
Church (general)	1.5
Factory (general)	1.0
Factory (fine work, local)	8.0
Factory (coarse work, local)	4.0



A Typical Distribution Curve

Hospital Corridors (general)	.5
Hospital Wards (general)	1.5
Hospital Operating Table (local)	15.0
Hotel Lobby (general)	3.0
Hotel Dining Room (general)	4.0
Hotel Bedroom (general)	1.5
Library Stack Room (general)	2.0
Library Reading Room (general)	1.5
Library Reading Room (local, on tables)	5.0
Lodge Room (general)	2.5
Moving Picture Theatre (general)	1.0
Offices (general)	3.0
Offices (local, on desks)	5.0
Residence Living Room, etc	2.0
Residence Bedrooms, etc.	1.0
Residence (reading light)	3.0
School Class Room (general)	4.0
School Corridors, etc. (general)	1.0
Shipping Room (general)	2.0
Stable (general)	.5
Store, Drug (general)	3.0
Store, Dry Goods (general)	4.0
Store, Furniture (general)	2.5
Store, Grocery (general)	3.0
Store, Jewelry (general)	5.0
Store, Millinery (general)	5.0
Store, Shoe (general)	3.0

It is self-evident that no hard and fixed rule can be applied to all cases, and that the values given are average values, for use only where the intensity is kept fairly uniform by consistent spacing of the lighting units. The importance of proper spacing of the light, and the selection of reflectors to distribute the light to the best advantage can hardly be exaggerated for on these factors the economical use or waste of electric energy depends; to say nothing of the offense to the eye of improper and uneven brilliancy.

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EDITORIAL COMMENT ON ARCHITECTURE & THE TIMES

A MOVEMENT which promises to do much to develop the taste of the public along the right lines in matters of art and design as they concern the home life of the average family, is the campaign of education that is being launched by the National Association of Decorative Arts and Industries.

This association is the outgrowth of a convention held at the Hotel Astor, New York City, in the Spring of 1917, which was called for the purpose of formulating plans for such an organization.

This convention was attended by prominent educators, artists and designers as well as by representative men engaged in business enterprises that have to do with the production of works of industrial art or of manufactures into the production of which the element of artistic design enters.

The entry of this country into the war followed closely upon the holding of this convention and the plans were held in abeyance while all were devoting their thought and energy to the immediate necessity of prosecuting the war.

Now, however, that this deterrent to the completion of the organizing their campaign has been removed, the members of the association are taking active steps to carry forward the work.

The plans of the association include the establishment of a system of travelling exhibits of works of industrial art, furniture, furnishings, etc., for the purpose of showing the public articles of artistic merit and demonstrating how they should be used to produce harmonious effects. These exhibits will be sent from city to city, the co-operation of art museums, study clubs and other organizations being enlisted to aid in their showing, to the end that the greatest possible number of people may be reached.

Motion pictures of a character to further this educational work are to be used, according to the plan outlined, the pictures to be distributed through motion picture exchanges. It is also planned to employ a lecturer who will give educational talks in various cities, illustrating his lectures with motion pictures and lantern slides. The co-operation of newspapers is expected in the publication of helpful articles by authorities on interior decoration and the industrial arts.

The plan contemplates the formation of local organizations in all the cities throughout the country, to be affiliated with the central organization and to assist in carrying on the work, each in its own community. It is reported that several of these branches have already been organized.

This new association seems not only to have a clear vision of the aims it was organized to accomplish, but a comprehensive and systematized method of procedure to accomplish them.

Not the least of the benefits that may be hoped for from a campaign of this kind is a decided improvement in the character of the furniture and furnishings produced by altogether too many manufacturers and offered for sale in altogether too many shops.

AN ASPECT of the importance given to the matter of housing during the war is its possible beneficial effect upon the designing of small houses in general.

The need for planning great housing projects turned the attention of many architects of the highest attainments to the subject of small house design, something that would not have happened in most cases under normal conditions. They brought to the solution of the problem all their skill in planning, their cultivated taste, their knowledge of the best traditions and their recollections of the charming cottage homes of England and the Continent. As a result the small houses and cottages they designed as parts of the large housing projects upon which they were engaged were not only different from the usual type of small house built by the carpenter-builder, but different also from the type of small house designed by the average architect who devotes himself to this class of house design. These small houses, therefore, set a new standard and establish new precedents. What the effect will be upon small house design in this country remains to be seen, but it should be considerable.

THE subject of war memorials is engaging much attention, as might naturally be expected, and it is encouraging to note that the idea of what may well constitute a war memorial is considerably broader than it ever was before. Just how the idea was disseminated or whether it sprang up independently in many minds as an expression of the present day attitude towards life, seems impossible to determine, but the fact remains that improvements of benefit to the community are now recognized as suitable war memorials. Public baths, wading pools for the children, bridges, community houses and many other public works are now crowding the time-honored soldiers' and sailors' monument for preference as war memorials. It seems to be a matter entirely of local conditions what form a memorial should take. If the community lacks any of the things it should have there seems to be a strong argument for the memorial of practical use in preference to the arch, shaft or statue. But the inspiration, the impressiveness of a dignified monument are of incalculable value, if the monument is worthy and is not erected at the sacrifice of some benefit to the community.

INDIANA LIMESTONE

The ARISTOCRAT of BUILDING MATERIALS

The Movement for Useful Memorials

The rather awful artistic experience which the United States underwent after the Civil War in the matter of soldiers' memorials will scarcely be repeated at present.

There is a strong and wise movement afoot to make the memorials of the Great War's heroes serve the purposes of sentiment, beauty and utility alike.

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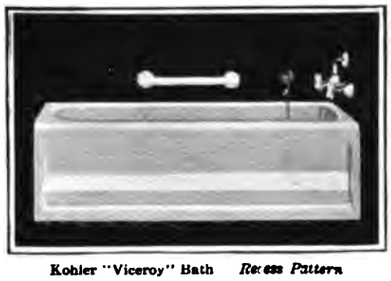
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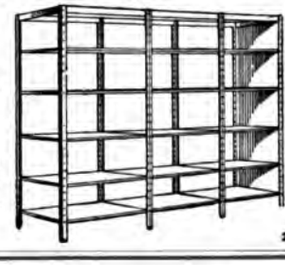


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